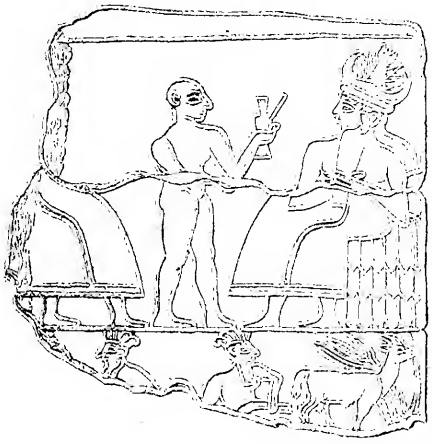

WILLIAM PEPPER, M.D., LL.D.,

President of the Babylonian Exploration Fund.

OR

EXPLORATIONS AND ADVENTURES ON THE EUPHRATES

THE NARRATIVE OF THE UNIVERSITY OF PENNSYLVANIA EXPEDITION TO BABYLONIA IN THE YEARS 1888–1890

BY

Director of the Expedition

WITH ILLUSTRATIONS AND MAPS

VOLUME II.

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COSSAEAN POTTERY *(Continued)*.

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NIPPUR

OR

EXPLORATIONS AND ADVENTURES

ON THE EUPHRATES

NIPPUR

OR EXPLORATIONS AND ADVENTURES ON THE EUPHRATES.

CHAPTER I.

AMERICA AND RETURN.

Left at Smyrna—Meeting with Hamdy—Asked to Resign—A Courageous Committee—Supineness—A Friend by Force—Helped by Hamdy—An Extra Permission—Musa Bey—Armenian Atrocities—Drunkenness—Soli—The Nosairieh—Tomb of Lazarus—Beirout Custom-House—Fireworks for Magic—Personnel—Medical Schools—Engaging Camels—Damascus—Bullying the Governor—A Greek Ruin—The Desert Post—The Hills of the Robbers—Kiriathaim—A Palmyrene Hostelry—Lady Digby's Tribe—Palmyra—A Remembering Machine—A Mediæval Castle—Roman Milestones—Among the Bedouin—Ransom Demanded—Exacting an Escort—The Ambush Foiled—An Ancient Reservoir—Frustrated Plans—Arabs and Blackmail—Change of Route—Removal of the Wali—Naphtha Wells—A Storm—Anazeh Arabs—Cholera and Plague.

IN the previous volume I recorded my embarkation on a Turkish steamer bound to Constantinople from Alexandretta. My first two days on board this steamer were spent in a sort of torpor, so exhausted was I with the journey from Baghdad to the coast. After leaving Mersin, however, I began to revive. We touched at all sorts of queer and charming places. At Addalia, Rhodes,

and Chios I landed and explored the towns, in company with M. Berger, military attaché of the French embassy, and a Turkish Colonel. At Addalia we called on the Wali, and he called on us later on the steamer. Both this place and Rhodes were singularly fascinating.

At Smyrna I had rather an amusing, but very uncomfortable experience, which delayed me in all nearly three weeks. The captain had announced that we should spend two days there. I went on shore toward noon of the first day and spent the afternoon with the consul, Mr. Emmett, and the missionaries. On returning to the quay about ten o'clock I found that my boat had gone. There turned out to be no cargo, so the captain changed his mind and sailed a day earlier than he had intended. My letter of credit, my money, my clothes, and my papers were all on board, and I was stranded in Smyrna with about eight dollars in my pocket. It was a week before the *Gedeklir*, a boat of the Mahsousse, or Turkish line of steamers, which belongs to the Sultan himself, arrived at Smyrna on its way to Constantinople, and I became a passenger. It was a small boat, and the deck was crowded from stem to stern with khojas returning from their Ramadhan preaching in the provinces. Directly in front of the cabin door was a harem, screened off from the rest of the deck by curtains, through which I had to pass every time I went in or out of my cabin. The only place on deck where I could find room to sit was the captain's bridge, and to reach that I had to step over and wind my way in and out among women and men lying on the deck almost as closely packed together as sardines in a box. We had one cabin passenger, a white-turbaned mollah, who had his own servant with him and his own supply of rich Lesbian wine, and mastic from Chios, which he insisted upon sharing with the captain and me. I was rather surprised to see a Moslem mosque lawyer drinking openly, especially on a vessel

crowded with fanatical khojas. We took several days for the voyage, running in and out among the gulfs and bays of Mitylene and the Troad, and touching at various picturesque and most romantic towns.

Arrived at Constantinople, I found that all of my effects, which the Mahsousse agency at Smyrna had promised to telegraph to the company to hold for me at Constantinople, had gone on up the Black Sea. I had expected to receive at Constantinople a financial report from Haynes, which it was necessary to present to the Committee at home, but none arrived. Letters were awaiting me, however, giving a very favorable but, as it turned out later, incorrect account of the attitude of the Wali toward us, and what he was doing to render our return possible.

Hamdy Bey was more than cordial. He expressed great indignation and shame at what had happened, and apologized for the way in which we had been treated throughout. It appeared that Bedry had extorted from us some £180 beyond the amount really due him, and I was urged to make a formal complaint against him. This I refused to do for two reasons: in the first place, he was a protégé of the Minister of Public Instruction, and I did not care to embroil myself with that official; in the second place, I felt that the fault lay almost as much with the Museum officials as with him, inasmuch as they had failed to furnish written instructions which would have defined his duties and his salary, and had, in fact, handed us over to him bound hand and foot. What he had done was the natural outcome of their system. I furnished Hamdy with a memorandum of payments made to Bedry, for all of which I had been careful to take receipts, and then left the matter in his hands. I also made a full statement to him of what I had done, and told him that it was the necessary outcome of the way in which we had been treated, and that it was impossible to deal honestly under

such circumstances. He realized this, and showed at once a desire to meet me half-way; and before I returned to Nippur the next time we entered into an agreement of mutual confidence, I promising him to guard the interests of the Museum as carefully as I would my own, and he accepting my word and reposing in me full confidence. I told him of my visit to Yokha and other places, and he suggested to me that I might under the law make *sondations*, or tentative explorations, at all such places, to determine whether scientific explorations would or would not be profitable. He proposed also to allow me to substitute for Birs Nimrud, which after my visit to it I no longer regarded as especially desirable, Mughair, or any other place which I wished, without compelling me to provide impossible maps. He called with me on Munif Pasha, the Minister of Public Instruction, to arrange for my return to Nippur, and showed himself anxious to do everything possible to insure the success of the Expedition.

While at Constantinople I received a telegram from Philadelphia advising me that continuance of the Expedition was improbable, and a letter from the President of the Fund, asking for my resignation. I could not but feel that the Committee was quite justified in making such a request, but I feared that my resignation would be the end of American exploration in Babylonia for some time to come. My effects returned from Trebizond to Constantinople on the 22d, and on the same day I started for Bremen, stopping at Dresden on the way to see my family. My wife's representations that my honor was at stake, and that I must carry the Expedition through to success or perish in the attempt, fixed my resolution to endeavor to secure the continuance of the work under my own direction.

I sailed from Bremen on the 2d of July, reaching New York on the 12th. It was the 15th before I met any

member of the Committee. The first one whom I saw was of the opinion that the only course to be pursued was to settle up our accounts and bring the Expedition to a close. I was much hampered by the lack of a financial report from the business manager, but from the papers in my possession and the books of the treasurer, I made up a report of some sort before the meeting of the Committee. Before that meeting I had an opportunity to go over the situation with Mr. Frazier and Mr. E. W. Clark. They were favorably impressed with the results accomplished by the first year's campaign under great difficulties, and decided to advocate the continuance of the Expedition. I was not prepared, however, for the extremely favorable result of the Committee's considerations. I merely presented to them a report of the work done, a catalogue of the objects found, a statement of moneys expended, and an estimate of the amount required to continue the work for another year. They decided to send me back with *carte blanche* to manage everything as I saw fit. The only condition which they imposed was that they should engage no one, and deal with no one but me, and that they would hold me, and me alone, responsible for everything. They also placed at my disposal for the work of the ensuing year a sum larger by $3000 than the sum provided for the first year. I doubt if a Committee has ever shown itself more royally trustful and liberal than this Committee, and I left Philadelphia with the determination that I would merit the trust. It was stipulated that I should go at once to Constantinople. If I could arrange to return to Nippur, as I believed I could, the Expedition was to continue. If not, I was to close the matter and return home.

Stopping at Dresden to pick up my family on the way, I reached Constantinople August 21st. Negotiations for our return to Nippur had not progressed in my absence. Hamdy Bey was absent in France and Switzerland. Our

Legation had done nothing, and the Turkish authorities no more. Our representative in Baghdad had been remiss about writing, and if it had not been for the fact that Bedry was in communication with Diwanieh I should have been quite in the dark as to the doings of the Baghdad Government and the condition of the country. Since my departure a cholera epidemic had broken out in the marsh region between Shatra and Nasrieh, and spread over the whole country and into Persia. The country of the Affech had suffered with particular severity, and both Mekota and his uncle Shamir were dead. In Baghdad, it was reported, the deaths reached seventy-five a day. All the consuls had left the city and were encamped in the open plain along the Tigris above the town.

Bedry, in Hamdy's absence from Constantinople, attempted to extort more money, and foolishly committed himself in writing. It turned out also that he had purloined two of our most valuable tablets, and presented them to one of the members of the Expedition, who had carried them away with him. They were ultimately handed over to the Museum in Philadelphia, but the whole proceeding was of such a character that it left me in great uncertainty as to the security of the other objects found by us. On Hamdy's return I made use of my information, not to have Bedry dismissed, but to turn him into a faithful friend and assistant. He appreciated the fact that he had put himself in my power, and brought my wife as a present a sampler with this motto worked by his wife: "Reveal not your secret to your secret friend, otherwise you publish your secret. If you are not secret to yourself, how shall your secret friend be more secret?" It was only necessary from this time on to refer to money matters, or to commence a search for the missing tablets, to secure Bedry's faithful co-operation. He proved himself invaluable from his knowledge of his own government and people, and without him it

would have been impossible for me to have accomplished much that I did accomplish. Moreover, he did it in no surly way, but heartily and kindly, so that I finally came to regard him as a valuable friend. I could only wish that I had known and understood him better the previous year. Hamdy assigned him to me for my especial assistance, and all that Bedry did for me was done with his approval.

Hamdy himself did not return to Constantinople until about the 25th of September. After that matters began to move more rapidly. With Bedry's assistance I unearthed a private telegram of the Wali of Baghdad to the Minister of the Interior, informing him that it was impossible for us to return to Nippur without a war. This was not meant for my eye, and it was quite different from the information furnished to Haynes in Baghdad. With the assistance of our Legation and of Hamdy Bey I caused peremptory orders to be telegraphed him by the Grand Vizier to make immediate arrangements for our return. Hamdy made every exertion to enable me to go back, taking much the same view of the situation as I did myself. It was not, however, until Thursday, the 10th of October, that I was actually able to sail from Constantinople on my return to Baghdad. Those had been six weeks of great anxiety and suspense. The Governor-General of Baghdad actively, and Munif Pasha and the Minister of the Interior passively, opposed my return. I could obtain no reliable information from Baghdad as to the action taken by the Governor-General in relation to the burning of our camp by the Arabs, which the Wali still persisted in treating as an accident. The cholera epidemic which was devastating Irak was also urged as an argument against our return. Only Hamdy Bey was on my side, and on his friendliness and activity depended my success or failure. But even after I had left Constantinople my suspense was not ended, for a promise in

Constantinople, and its fulfilment in Baghdad are two very different matters.

As already stated, I left Constantinople in perfect agreement with Hamdy Bey, and enjoying his full confidence. I was authorized to make *recherches scientifiques*, or tentative excavations, at such mounds as I might wish, for the purpose of determining whether or not it would be desirable to conduct fuller excavations there. This permission was to have been given me in writing, but, after the Turkish method, at the last moment, I was informed that no writing would be necessary, and that the verbal permission would suffice. No commissioner was sent with me from Constantinople, and it was arranged that I should receive in Baghdad a commissioner who would be congenial to me, and whose presence would in fact be but a form to satisfy the law. I had been promised the exchange of Birs Nimrud to Mughair, but this was not effected before I left. A telegram was, however, sent to the Governor-General of Baghdad, authorizing excavations by me at Mughair, provided there were no obstacles in the way. Later it turned out that Mughair was in the vilayet of Busrah, and not Baghdad, something which our maps did not show, and I therefore never actually held a formal permission to conduct excavations there.

Outside of the anxiety caused by the uncertainty of our future, life at Constantinople was, as usual, intensely interesting, although we all suffered from the dengue, which was raging at that time. Musa Bey, a Kurdish chief from the neighborhood of Bitlis, in the Armenian mountains, who had terrorized that region for several years, levying blackmail on all the roads, treating the Christian Armenian population with great brutality, and deflowering and carrying off their women at his pleasure, had just come to Constantinople to be tried. Some six years before he had almost murdered two American mis-

Orient and Occident.

O. Hamdy Bey, Director of the Imperial Ottoman Museum, and John P. Peters, Director of the University of Pennsylvania Expedition to Babylonia, in the garden of Hamdy Bey's house at Courouchesme, on the Bosphorous.

sionaries, Knapp and Reynolds, for which our government has never exacted redress. Finally the English Government brought pressure to bear, and so much was published about Musa's enormities that he was brought, or rather came, to Stamboul for trial. About fifty witnesses against him, chiefly Armenians, also arrived and were lodged at the Armenian Patriarchate. All mention of the matter in the press was forbidden, and my Turkish friends told we that it was dangerous even to speak of it in private. The English Government did not dare to push the matter vigorously, because of the use which the Russians made of any such action on its part to persuade the Sultan that the English were his enemies and they his friends. The Sultan himself declared that Musa could not have committed the crimes attributed to him, because he was a pious Moslem; and Musa, after being allowed to escape once and almost a second time (in preventing which latter escape we all had a hand), was at length acquitted.

The conditions in Armenia were at that time entering upon the final stage of massacre which has since been reached. The Kurds were killing and outraging at pleasure. The Russian Government had massed troops on the boundary and seemed to meditate an invasion of Armenia. It was encouraging the Armenians to be restless, and indirectly it was encouraging the Turk to perpetrate atrocities which would give it ultimately the opportunity to absorb Armenia. The English Government was pursuing a weak and futile policy, occasionally protesting against Turkish outrages, but taking no active steps to enforce its protestations. The Turkish Government had instructed at least one of its governors, the Wali of Erzeroum, to do nothing against the Kurds for their outrages upon the Armenians. The commander of the troops in that province confided to one of his officers his hope that the Armenians would rise, for he had every-

thing prepared to serve them as the Bulgarians were served. He had been prominent in the Bulgarian massacres. Crete was in a state of anarchy, and England was supposed to be plotting to obtain possession of it. Arabia was in a condition of ferment. There was also much discontent among the Turks themselves, and severe criticism by them of the government. Something of this discontent I saw myself; but while the Turks with whom I conversed in the provinces almost without exception had spoken with great freedom of the corruption of the government and predicted its speedy downfall, in Constantinople their tongues were stilled, and they dared not speak of such matters for fear of the ubiquitous police spies.

On the steamer to Beirout I met one of my old acquaintances, Salih Pasha, with whom I had made the journey from Baghdad to Aleppo the previous spring. He had been appointed Governor of Marash, which he attributed to the fact that I had spoken favorably of him to the Grand Vizier, and was grateful accordingly, insisting that our "harems" should make acquaintance, and embracing me when he left the ship at Alexandretta. On our way up the Euphrates I had found him a pious, God-fearing man. He was then accompanied by a private imam, and was somewhat too much given to praying, stopping our caravan daily in mid-route to attend to his devotions. Now he was accompanied by another Pasha on his way to his post at Urfa, and the two of them got drunk every evening. I regret to say that in my experience of Turkish officials, outside of Constantinople at least, this is a frequent failing.

We landed at Smyrna, Mersin, Alexandretta, Ladakieh, Larnaca in Cyprus, and Tripoli, spending generally a day at each place. Along the coast of Asia Minor I noticed many ruin sites which had escaped my observation on my first trip, such as Korghos, Ayash (Aleusia),

Selefke (Seleucia), Holmi, Pershendy, and several others for which I could find no names either ancient or modern. During our stop at Mersin we visited Pompeiopolis, or Soli, where a squad of workmen were digging for treasure among the ruins under the direction of a Turkish official, who supervised the work from the shade of an umbrella. This work was done by order of the Wali of Adana, who had heard that the Arabs had found treasure there. The Arabs had, in fact, found some gold coins, a couple of which I saw. These bore the names of Theodosius and his daughter Pulcheria (408–457 A.D.). Farther inland, I was told, a number of Polish silver coins had been found of the years 1400 to 1600 A.D. The Arabs had also found at Pompeiopolis a leaden box with a Greek inscription, which had once contained Church archives. Near an old castle a mile farther north a badly effaced Armenian inscription had been exposed, dating presumably from the period of the Rhupenian Armenian Kingdom (1064–1375 A.D.), which embraced this region. But none of these things did I see for myself.

One of the railroad officials at Mersin showed me a statue which had been brought to him from some unknown place in the interior, and which he hoped would possess some archæological value. It was Greek work barbarously executed. The same official told me of the difficulties experienced by the management in selling railroad tickets. The natives wished to haggle over the price, and would often come back day after day to try to cheapen the ticket by bargaining, and at the end perhaps journey to Tarsus or Adana by wagon or by camel at a higher price, because they conceived themselves cheated, or their importance insulted in the refusal of the officials to cheapen the price by bargaining. In every other matter of business the asking price was not the real price, and they would not believe that it really was so in the case of railroad tickets. Then, again, they could not

conceive of anything starting on schedule time, and were constantly being left, to their great indignation. These inconveniences, together with the serious disadvantage to the Turkish mind of the rapidity of service, made the railroad unpopular, and camel caravans were still the preferred means of transport, so the manager of the road told me.

At Mersin, Ladakieh, and Larnaca the Reformed Presbyterians have schools and missions. Their work at Ladakieh lies largely among the Nosairieh, one of those secret religious sects in which the country abounds. The missionaries say that these people believe in the transmigration of souls. They venerate the life-germ, even as it shows itself in some plants. They reverence Ali as a divine incarnation, now existing in the sun or moon. In the stars are other saints; and therefore the heavenly bodies are worthy of worship. Like the Mohammedans, they venerate ziarets of the holy dead. They have further secret doctrines and private rites, disclosed only to the initiated. Whether they are Mohammedans with heretical beliefs, or have merely adopted into another faith some of the doctrines of Islam is not clear. For purposes of the military conscription the Turkish Government counts them as Moslems; in the ordinary relations of life they are treated as non-Moslems. They are said to have originated in the Euphrates region in the tenth century; they now number about 200,000, inhabiting the mountains from below Ladakieh northward to Aleppo, and from Adana to Mersin. They are divided into two main sects. They are a low and degraded people for the most part, but not immoral, so the missionaries assert, except that they sell their daughters to the Turks as slaves; and that their religious heads or sheikhs are privileged to cohabit with any woman, married or unmarried, and the husbands even urge the sheikhs to honor them by the selection of their wives. They are

robbers, and their country unsafe; and they are all banded together to resist and outwit the Turkish Government, especially in the matter of conscription.

There are some interesting remains of antiquity at Ladakieh, or Lattakia, as it is also written. Besides those mentioned in the guide-books, the most conspicuous of which are the Arch of Triumph, ascribed to Septimius Severus, and the so-called Church of the Pillars, I observed a broken column with an inscription of Diocletian, and in an orthodox Greek church a handsome lectionary, written in capitals, and ascribed to Theodosius, Metropolitan of Jerusalem, 492 A.D.

At Alexandretta I took on board the beds, guns, and other paraphernalia left there by us on our way out. An American concern, the Stamford Manufacturing Company, has a station at this point, which is also the principal port for the export of licorice to the United States, where it is used mainly, I was informed, to color tobacco. We took on a large cargo here, chiefly of dhurra and barley. From Alexandretta onward we were afflicted with mosquitoes, which came into the cabins of the steamer in great numbers.

At Larnaca we visited the grave of Lazarus, and I somewhat shocked our pious captain by suggesting to him that saints, being the great ones in heaven, do, like the great on earth, have several domiciles. So Lazarus presumably lay in this tomb at one season, and at some of his other tomb abodes elsewhere at other seasons. Only thus could the fact be explained that the same saints were in so many cases reverenced at several tombs. Tripoli was a fascinating place, like Rhodes still redolent of the Crusades. It is a mediæval Italian city inhabited by Moslems.

We reached Beirout just before sunset, Sunday, October 20th. Such a landing I never experienced before. Dr. Post, of the Syrian Protestant College, met us and took

us in charge, or I do not know how we should have managed. At the landing-stage our boatmen quarrelled with the boatmen of another boat about the right of way, and the two parties fell to fighting with their oars. The dock and neigboring streets were filled with a wild mob. A number of conscripts were being shipped to Constantinople, and their women were fairly wild in consequence. The custom-house in Beirout is said to be the worst in Turkey, and I can well believe it. The greater part of our effects we did not receive until the following day. Everything had been overhauled and maltreated, some things were stolen, and considerable damage done. All my books were carried off to the Serai for examination, excepting those that were contraband, and they, of course, were passed through the custom-house at once, as well as our arms. It should be said that any book which deals with the geography, history, or religion of Turkey is contraband, including, therefore, all guide-books, and indeed everything that one specially wants in the Turkish Empire.

I remained in Beirout until November 7th, making purchases and waiting for the arrival of Hajji Kework and Artin, two of our last year's servants, for whom I had sent to Aintab, their home. Among other things, I bought a horse from one of the medical missionaries, of which purchase I can only say that in matters of horseflesh even missionaries are human. I had purchased the greater part of the supplies for this year in Constantinople and shipped them to Baghdad. The first year Haynes had no outfit for instantaneous photography. To secure greater efficiency in this direction, I procured in Constantinople appliances for his large camera. I also equipped myself in America and Germany with two small cameras for snap shots, one of them the Kodak Number 1, which had been placed on the market not long before, and the other the Krugner Camera. I had endeavored in Con-

stantinople to purchase a supply of fireworks, feeling confident that I could use them with great effect among the Affech. It proved impossible to buy any there, but in Beirout I found a Greek who undertook to manufacture rockets without sticks (which he told me I could supply by reeds cut in the marshes), Roman candles, firecrackers, squibs, and some indescribable inventions of his own made in old tomato cans. It had occurred to me that my magical powers might be construed as responsible for the death of my old enemy Mekota and so many of his tribe as punishment for their treacherous burning and plundering of our camp, and I felt sure that fireworks, judiciously applied, would assure and confirm the development of this idea, and protect us from such disasters in future. I wrote to Noorian that if he came in contact with any of the men of Affech he would probably meet some such sentiment, which he was on no account to discourage. While in Beirout I received from him the information that Berdi, who had murdered his two brothers as they slept, had himself been murdered in the same manner by his uncle, a man whom I had doctored the previous year.

I had already received from both Haynes and Noorian assurances that they would return with me to Nippur, their former protestations to the contrary notwithstanding, and had re-engaged them for the work. Through Dr. Post's assistance I engaged at Beirout Dr. Selim Aftimus, a native of the Lebanon, and a graduate of the medical department of the Syrian Protestant College, to accompany me as botanical collector and physician. I had been anxious the previous year to make botanical and zoölogical collections, and was provided with an outfit for that purpose; but I did not myself find time to do any work of the sort, and no other member of the Expedition was willing to attempt it. Now it seemed eminently desirable, in view of the presence of cholera in

the neighborhood of Nippur, and the possibility and even probability of an outbreak of the same plague the succeeding spring, to take with us a physician. I therefore sought to combine in one person the two functions of physician and natural history collector, but, as will appear in the sequel, poor Aftimus did not succeed in filling either part.

The Syrian Protestant College at Beirout, of which Dr. Bliss is the President, is an admirably equipped institution, and its most efficient and best-developed department is the medical. The physicians graduated here, however, are not allowed to practice without receiving a diploma from Constantinople. For this purpose they are compelled to spend about a year in residence there, and to learn the Turkish language. The Imperial Medical School in Constantinople is extremely inefficient, and its diploma amounts to nothing whatever. The law serves merely as an engine of corruption and oppression to hamper foreign institutions in Turkey, to keep out of the country as much as possible foreigners wishing to practice, and when they insist on coming in, to extort from them fees and subject them to annoyance.

Besides the Protestant college there is also a large Jesuit college and medical school at Beirout. This institution has a press which has done valuable work in publishing Arabic texts. The Bible Society also has a press at Beirout, and all of the Arabic Bibles and mission books are printed there, while the Turkish, Greek, Bulgarian, and Armenian books are printed in Constantinople. There is a considerable foreign colony of merchants and artizans here.

We all suffered in Beirout from the Abu Rekab, or Father of the Knees, another name of the dengue, which affected the whole country at that time, in some places bringing all business to a standstill.

Kework and Artin arrived from Aintab on the 5th, and

I should have started on the same day for Damascus, had it not been for the delay in passing through the custom-house some goods of Haynes's which they brought with them. On the 6th I sent them and the luggage to Damascus by mule. Aftimus and I left on the diligence at 4.30 A.M. on the 7th, reaching Damascus at 6 P.M. the same evening. Here I was detained until the 18th, securing a caravan. Through the instrumentality of Mr. Neshaka, our consular agent, who was also

STREET SCENE IN DAMASCUS.

interpreter at the British Consulate, I at last made a contract with Mohammed-er-Reshid, who held the contract for the desert mail between Baghdad and Damascus, to furnish us with fifteen dromedaries, two of them being dhelul or riding dromedaries, which we could use instead of our horses, if we saw fit; the proper number of attendants, and an extra guard of two armed men. For forty liras he was to transport us by way of Palmyra and the Euphrates valley, landing me in Baghdad within twenty

days, if I wished to go through without stopping, by the regular road over Palmyra and Deir, but giving me the option of making a detour from Palmyra to Resafa, or in such other direction from Palmyra as I might see fit, or permitting me to stop for the purpose of exploration at such places as I should select, provided that the total delay did not exceed ten additional days. It was my intention to take advantage of the permission to conduct *sondations*, and I took with me a few implements for that purpose. I wished also to explore the roads between Palmyra and the Euphrates. The theory was an admirable one, and the contract was well drawn; but from beginning to end Mohammed never did anything as agreed upon. We were unable to explore any new routes, we had no opportunity to make any *sondations*, and it took the entire thirty days to go straight to Baghdad.

There was another man, a certain Munsur Abdullah, who was introduced to me by the proprietor of the Hotel Dimitri, where I stayed, who was also anxious to secure the contract. He called himself Sheikh of Palmyra, which he was not, and offered a bribe to both Neshaka and Aftimus to influence me to give him the contract. When we finally made an arrangement with Mohammed, Munsur told us that we would do well to hire a man to protect us, as our lives were no longer worth anything, which was, however, only braggadocio to frighten us into taking him.

With the exception of the arrangements for our journey, the purchase of a horse for Aftimus, and a couple of tents, we had no business in Damascus. Nevertheless, we were compelled by Oriental obstructiveness and dilatoriness to stay there eleven days. It is a most interesting city, far more Oriental than Aleppo, and more fanatical than Baghdad. In the bazaars one little lad spat at me, calling me a giaour. Not a few pious Moslems would sell

me nothing whatever because I was a Christian. Many more scowled savagely as I passed their booths, and all raised their prices on me to such an extent that I was compelled to purchase by indirection. I ultimately succeeded in getting all that I wanted, at native prices, but I could not buy anything myself.

The most interesting portion of Damascus, to me, was the Maidan, a panhandle extension of the town along the Mecca pilgrim road. Here you find the bedouin in great numbers purchasing at the booths, or wandering up and

THE MAIDAN, DAMASCUS.

down the streets. Here also you find numbers of Druses from the Hauran. Next to this the Jewish quarter was most interesting. There are large numbers of Jews in Damascus, and I was much surprised at the freedom of their women. Passing through the Jewish quarter on the afternoon of the Sabbath, when the people were free and in the streets, the girls and young women chaffed me almost as boldly as would the operatives in one of our factory towns. The houses in this quarter are miserably

poor to look at. From the outside you would suppose them to be mere mud hovels, but within some of them are quite luxurious. I visited one with a fine inlaid reception hall, baths, and courts. This house contained a considerable library, which is open to the public. I offered an old Jew who was employed there as librarian a small backsheesh for his consideration and courtesy in giving me information. As it was the Sabbath, he could not receive it, but told me to put it under the rug on the divan, and he would find it on the following day.

There are no antiquities worth speaking of in Damascus. You are still shown the "street called straight," but the house of Ananias has left this street and gone to another part of the town. The House of Naaman the Leper is the name given to a so-called leper hospital maintained by the Christians just outside of the walls. There were about forty lepers there, of whom the greater part were out begging when I visited the place. Apparently they have a domicile in this leper house, and are expected to feed and clothe themselves. Almost all of them were fellaheen from the neighboring villages. In one room I found three lepers playing cards with two visitors, a man and a young woman from a neighboring village. There is another similar leper house for Mohammedans. But Damascus is a place which is well known, and its sights have often been described, including the ancient walls, and the great mosque, which latter was destroyed by fire after my visit.

We were informed in Damascus that the road to Palmyra was extremely unsafe, the mountains being infested with brigands. Neshaka, therefore, applied for a zaptieh escort for us. This was refused, for which refusal we were given various reasons, being told, among other things, that a Russian prince had lately gone through that country distributing arms to the bedouin, on which account the government did not wish to allow any one

having official protection to travel by the Palmyra route. Another statement was to the effect that the brigands in the mountains between Damascus and Palmyra paid the Governor-General of Damascus protection money to leave them undisturbed, on which account he was unable to send over that road any one furnished with government protection. The Director of the Imperial Ottoman Bank was of the opinion that by unofficial application we could secure that which was refused when officially applied for, and in company with him I visited the Chief of Police to ask for an escort. He refused it, and informed me that I would not be allowed to go by the Palmyra road, but must travel northward to Aleppo, and so down the Euphrates, and that if I attempted to go by the straight road to Palmyra I would be arrested and turned back. My camels, which had arrived a day late from the Hauran, where they had been employed, were already at the gate, and the greater part of my baggage had been carried out to their camp on the backs of porters. My contract with Mohammed was made and all my plans laid for the route through Damascus. The route which the Turkish authorities proposed involved an extra journey of two weeks, and proportional additional expense. For that journey, mules would have been the beasts to choose rather than camels, since there was water at all the stations; whereas on the Palmyra route camels were preferable on account of the lack of water.

By the assistance of Mr. Syufi, the Director of the Bank, and the Lieutenant-Governor, who seemed to be a sensible man, I finally forced my way into the Governor-General's presence in my riding clothes, equipped for the journey, with my spurs on my heels and my whip in my hand, and demanded of him an escort. Although governor of an Arab-speaking region, he was unable to speak one word of Arabic. The Turks treat the Arabs as a

conquered race, and put over them not infrequently men like this man, Ahmed Pasha, as completely a foreigner to them as a Russian would be to us. He was, moreover, notoriously corrupt. As he could not speak Arabic, Mr. Syufi was unable to interpret for me, and the official interpreter of the vilayet was sent for. I preferred, however, to speak directly to the Governor-General in such poor Turkish as I could muster. I told him that the whole thing was preposterous and an outrage; that I had informed the Grand Vizier and the Minister of Public Instruction of my intended route, and that both of them had approved of it; and that I did not propose to be turned back at the last moment for no reason. I finally told the Wali that I proposed to start by the route which I had stated to him, and that if the Chief of Police had me arrested and brought back I should make an official complaint through our minister at Constantinople. Finally he sent for the Chief of Police and ordered him to let me pass unmolested, assuring me at the same time that my blood was on my own head, and that he could not give me any escort or guarantee me protection through that unsafe region. I think I told him that it was his business to make it safe. At all events I told him that I should go, and that he would be responsible just the same if anything happened to me. He did not offer me a cup of coffee, nor did we part with any excess of courtesy. However, I had gained my point. Mohammed assured me that there was no real danger, and in consideration of a couple of liras more promised to provide two additional guards, Ageyli Arabs like himself. But after what I had said to the Governor-General it was considered probable that the police would inform the brigands that I must not be touched.

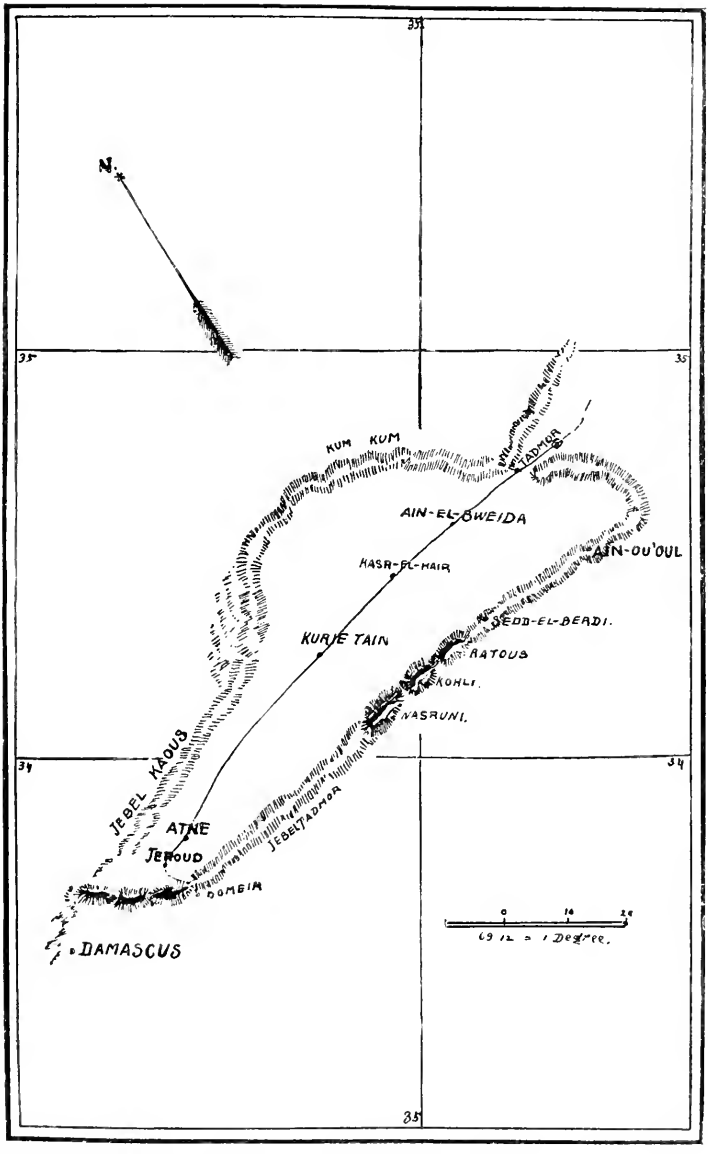
I had intended to leave Damascus Saturday, the 17th, but owing to Mohammed's delays, it was late in the afternoon of Sunday, the 18th, before we actually set out.

My object in starting on that day and at that hour was to prevent the delay which would have ensued had I waited until the following morning, for a caravan never succeeds in departing from a large city without the loss of half a day. We therefore went a couple of hours' journey to a little village called Harasta and encamped there for the night, to secure an early start on the morrow. There was a bitter cold wind, but we found a sheltered nook by the side of a dung heap, on top of which our cook's tent was pitched, and part of which was mixed with our dinner that evening, to Aftimus's great disgust. He, Mohammed, and I had reached the place a half an hour ahead of our men, and while we were waiting for them to come my newly acquired horse attempted to work the destruction of us all, but only succeeded in putting one of my fingers out of joint and wrenching it so that it was lame for some weeks and has never quite recovered its normal condition. A Turkish Bey to whom the dung heap belonged invited us to come and lodge in his house, which I refused, but later in the evening, as we heard him singing with a party of roystering friends, we found our way through a filthy court of camels and barking dogs, and up a dilapidated and dangerous outside staircase, and joined the merry company.

The second night we spent at the village of Domeir (the Obair of Kiepert's map), where there was a ruin of an old Greek temple. Neshaka had sent ahead of us one of the cawasses of the English consulate, whose home was at this place. That made us, as it were, masters of the town. Life here seemed to be conducted principally on the roofs. There the women spun, rocked their babies, and made their visits, and there the men loafed. By virtue of our relation to the English cawass I was permitted to walk over the roofs at pleasure and pry into all the household affairs. Domeir is not on the road to Palmyra. Mohammed had taken us there, a day's joun-

ney out of the way as it proved, in order to meet his incoming post from Baghdad, this being the station at which the postman comes out of the desert, six days' journey from Koubeitha, near Hit. It was the English who originally started this camel postal route across the desert, under Mohammed's father. A few years since the Turks established a rival route, and finally, as owing to the Suez Canal this road had ceased to be of use to the Indian administration, the British service was abandoned, and now only the Turkish post across the desert is in use. From the incoming postman we learned that some of the Arabs were on a ghazu, and that the country was disturbed.

Our next station was 'Atne, near Jerud, the ancient Geroda. About an hour from Domeir we passed a Greek ruin, for which I could obtain no name. At 'Atne we saw the remains of a large building of the Arabic period. Near 'Atne are large salt deposits, in which the salt assumes many fantastical shapes. The people of the surrounding country connect with this locality the story of Lot's wife, and call the saltrocks opposite Atne, Medain Lot. The region from 'Atne to Kurietain was said to be particularly dangerous, the hills to the east harboring robbers, about whom Mohammed told us many stories. Se'id Abdullah, a merchant of Baghdad, and Abu Gheni of Sidon, had attached themselves to our caravan at Damascus, so that we numbered in all nineteen camels, two horses, one she-dog, and twelve men. All kept close together, and arms were held in readiness the whole day. About seven hours from 'Atne we passed a ruin called el-Quseir, apparently an Arab military khan. We encamped near this in the desert. At night no fires were lighted, although it was so cold that water froze solid. On the hills we could see Arab camp-fires here and there, but on what any one lived in that barren desert it was hard to conjecture. We carried fodder for all



Map of Route from Damascus to Tadmor.

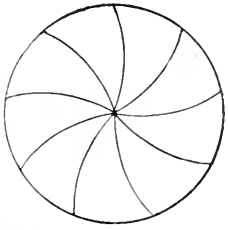
our beasts, even for the camels. The latter were fed each evening on meal balls, and during the day they browsed as they marched.

The next day, two hours after starting, we passed a heap of stones, said by Mohammed to be a bedouin place of prayer. At a quarter before two we reached Kurietain. This must have been some ancient Kiriathaim, in Syriac, the Nezala of the Greeks. It is the most important station on the direct road from Palmyra to Damascus. Here there is plenty of water, including hot sulphur springs, and a town of some importance has always existed. I found several fragments of inscriptions built into the walls, one inscribed stone with the name of Zenobia on it forming the lintel of the gateway to a courtyard. Not far from the present town is an ancient tel, called Ras-el-Ain. The Wakil, or Head Priest of the Syrian Catholics at Kurietain, showed me an old and fine-appearing Syriac manuscript of the Gospels, but said that it was not for sale. He told me that the priest in Deir, who had tried to palm off forged antiquities upon us, was his "brother." He himself did not appear to be interested in antiquities, or in religion either, for that matter, but was very anxious to sell me some native wine for use on my journey. By his directions one old priest took me into the church and sang part of the service for my benefit.

The next night was spent at Kasr-el-Hair, the ancient Heliaramia, seven hours and a half from Kurietain. Kiepert's map incorrectly represents a chain of hills as partially crossing the plain near this point. In reality, from a point below 'Atne on to the very gates of Palmyra there is an unbroken plain, rising gradually toward the northeast, and bordered by hills on both sides. At Kasr-el-Hair there are the ruins of a tower some fifty feet in height, and originally forty feet square at the base. The construction is characteristically Palmyrene, and on one of the corner-stones half-way up the tower are two sun

discs, one plain, and one with curved radii. By the side of the tower there is a building of brick and stone surrounding a large court some two hundred feet square, entered by a very ornamental stone gateway on the east side. The lintel of this gateway is a stone fifteen feet in length, elaborately carved. The door-posts, which are single stones, are likewise carved, but not quite so elaborately. This building had been, apparently, a caravanserai. Outside of the wall and tower there were a couple of smaller ruins, and near one of these an ancient well, now choked up. Half a mile to the north was another

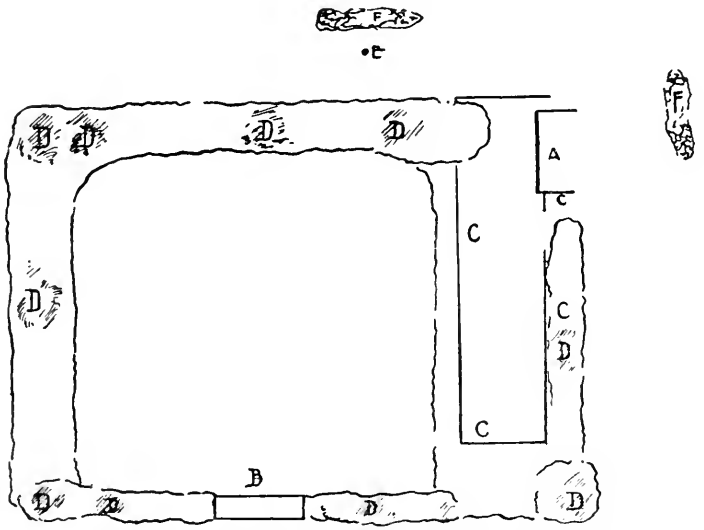
RUINS OF TOWER AT KASR-EL-HAIR, THE ANCIENT HELIARAMIA.



SUN DISC WITH CURVED RADII, CUT ON A STONE IN THE TOWER AT KASR-EL-HAIR.

gateway, similar to the one just described, except that the lintel and door posts were plain. The building belonging to this latter gateway had quite disappeared, but I presume that it was a second caravanserai, built because one did not prove sufficient to accommodate all the travellers on this route. Not far from this second khan were the ruins of a large reservoir, from which an aqueduct ran southward several miles across the plain to Sedd-el-Berdi, or Dam of the Marsh Grass. Here are the ruins of a dam across a ravine in the hills, by means of which in the rainy season water was stored for use in

the dry. Kasr-el-Hair was evidently a station on the road to Palmyra in the time of the prosperity and wealth of that city. The whole equipment of the station was singularly interesting and complete, but I have never seen an accurate description of it. In Baedeker's guide-book it is stated that there is a Maltese cross on the tower. This is incorrect, some travellers having mistaken the Palmyrene sun disc for a Maltese cross.



PLAN OF PRINCIPAL RUINS AT KASR-EL-HAIR.

A—Tower. B—Gate of Caravanserai. C—Wall of small stones of later date than the other parts of the Ruins. D—Mounds covering Walls of Caravanserai. E—Old Well. F—Outlying Ruins.

The following night we were encamped upon the plain, between the ancient well of Ain-el-Bweida and the mountains southward. At Ain-el-Bweida an ancient road column still stands, but no inscription is visible. The well at this point is very deep and evidently ancient. In Zenobia's time there was a road station here, and to-day the Turks still have a miserable little garrison, with two or three gendarmes stationed by the well in rude barracks.

Four hours and forty minutes beyond 'Ain-el-Bweida, and two hours and twenty minutes from the mouth of the little pass through which one enters Palmyra, almost in the middle of the plain, are the remains of a large building, by which is a column similar, except for its lack of inscription, to the Diocletian milliaria which are found on the road from Homs to Palmyra, and Palmyra to Erek.

The hills on the east of the plain, all the way from 'Atne to Palmyra, are called Jebel Tadmor, those on the west from 'Atne to Kurietain are called Jebel Kaous. The former have a bad reputation. The vegetation in the neighborhood of 'Atne, what little there was, was almost entirely a species of kali, called by the Arabs 'odhu, which is also the common vegetation on the Damascus plain, south of Domeir. At 'Atne there was running water. From that point on to Kurietain there was no water whatever. After we began to rise above the salty deposit in the neighborhood of 'Atne the vegetation of the valley was stunted tamarisk. The ground throughout the whole plain was burrowed by countless marmots (jerdheh), large black lizards, and rabbits. Gazelles were numerous. I saw also some specimens of a curious creature, called ghereir, which has the color of a skunk, the tail of a beaver, the claws of an armadillo, and the size and pluck of a racoon. The men killed one, which made a brave fight. The dog was afraid to touch it. We saw a few camps of the Ahalu Anazeh, of whom Mijwel, husband of Lady Digby, was once chief. It will be remembered that this eccentric Englishwoman married an Arab chief, she spending half of the time with him in his camp in the desert, and he half of the time with her in Damascus. She acted as a sort of Lady Bountiful to his tribe. They were the guides to Palmyra, and it was considered impossible to go there except under their guidance, and by paying a large backsheesh. These

Ahalu Anazeh have large flocks of sheep, but where they found water for them I could not understand.

From Kurietain onward, Fem-el-Mizab, the great mountain of Tripoli, was visible behind us, and a bitter cold wind swept the plain. At the upper end of the valley the hills come together, or rather there is a small cross line which joins the two ranges. Through this there is a natural pass into Tadmor. On the hills on both sides, and in the valley, are abundant ruins and tower tombs. On the left, as one enters the pass, are the remains of an aqueduct. It was almost one o'clock on Saturday, November 23d, when we came to camp just to the north of the great temple of the sun god. The old temple contains the modern town, and the effect of the miserable mud shanties among the grand walls and columns is very incongruous. At one time the place was a fortress, and the great western wall of the present day is built of old remains, ancient columns in some places acting as binders. The principal industry of Palmyra, if there can be said to be any industry there, is the salt works, which are now in the hands of the Commission of the Public Debt. The people of the town are, by all odds, the laziest I ever saw, and miserably poor. I saw no man do a stroke of work, although the women were busy enough. One of the occupations of the women throughout the country is to collect camels' dung, and cow dung where it may be had, and dry it for fuel. It is not a graceful avocation.

Sunday I spent wandering over the roofs of the houses, exploring the old mosque, and photographing the people, but most of all wandering among the great streets of columns, and the temples which are still standing on the plain. Seeing women with water-jars going in and out of a hole in the ground, I was about to descend to ascertain what was within, when a number of women rushed out and warned me off, telling me that it was their hot bath. While I was engaged in photographing on the

plain, a zaptieh, Ahmed by name, who had escorted us one day's journey on the Euphrates the year before, came with a comrade and told me that the Kaimakam wished to see me. Like the Governor-General of Damascus, he proved to be a Turk who could speak no Arabic, although set over an Arabic community. He demanded an account of me and my party, and insisted upon visé-ing my passport. He also inquired curiously as to the meaning and use of my Kodak camera. The Turks are very jealous of photographing, drawing, and taking notes, and all photographing in the neighborhood of fortresses is positively forbidden. This is the same rule which prevails in European countries, but the Turks designate as fortresses many places which we should count as nothing but interesting old ruins, like St. Jean D'Acre and Rhodes. Sometimes jealous officials extend the prohibition to Baalbec, Palmyra, and other ruins of the interior. I thought it well, therefore, not to be accounted a photographer if I could avoid it. When the prefect asked me the meaning and use of my camera, I at first forgot my Turkish altogether. When he repeated his question in another form, asking whether that were a telegraph machine (a confusion between telegraph and photograph is very common among Turkish officials in the interior), I replied that it was not. When he pressed me further for the name of the machine and an account of its use, I told him that it was a "remembering machine"; that when I wished to remember anything that I had seen I fixed the machine so, and touched this little button in this way, whereupon the scene was written down upon a piece of paper, and at my leisure afterwards I could take it out and recall to my memory what had interested me there. A remembering machine was quite a new instrument, and excited much interest, and no objection whatever was made to its use.

View of Ruins of Palmyra.
Columns with brackets for statues, in the foreground ; in the background, mediæval castle on hill west of city.
From Photograph of Wolfe Expedition.

Palmyra has been so well and often described and depicted that it seemed to me almost like a place I had seen and known before. The Turks strictly forbid the removal of antiquities; but illicit digging continues, and almost every traveller buys and removes a few busts and mortuary inscriptions. The natives themselves occasionally use these monuments of antiquity for gravestones for their own graves, and in the mosque within the temple precinct I observed one newly made grave on which stood a tombstone with an ancient Palmyrene inscription. There are visible at Palmyra ruins of the time of Zenobia, Diocletian, Justinian, and the Caliphate. To the west of the city on the hills there is a most picturesque castle. This I visited with an escort of two zaptiehs furnished by the Kaimakam, who told me that it was not safe to go there without an escort. The castle is surrounded by a deep moat cut in the rock. The depth of this moat was forcibly brought home to me by an escapade of my gentle missionary steed, who was inspired to stand upon his hind legs on the very edge of it, so that we all but rolled down to the bottom together. This castle is unlike any other Arabic or Turkish construction at Palmyra or elsewhere in that region. Both in its situation and architecture it resembles the castles of mediæval Europe. As stated, it is surrounded by a deep dry moat, cut in the rock. The whole of the island thus formed is occupied by the massive walls and dungeons of the still towering fortress. The drawbridge is broken, and access to the interior is obtained with difficulty by scrambling up the precipitous sides of the moat to a hole in the southwestern corner of the castle wall. The outer walls of the castle are of stone, but the interior work is chiefly in brick. All space is most carefully utilized. Battlement rises above battlement, three tiers of defences in all, while down into the solid rock beneath vaults and dungeons have been cut. There is a tradition

that it was built by a powerful Druse chief, but there are no inscriptions to determine either its date or its origin. Had the crusaders ever reached this point, I should suppose it to be their work. The castle of Rehaba, on the Euphrates, resembles it more closely than anything else, but even that is different.

The natives brought to my camp, or offered to bring, many antiquities of the common Palmyrene type. They brought also hundreds of coins, chiefly copper, with Roman and Byzantine dates. I observed as ornaments on a woman's head-dress two silver coins which the owner said had come from Erek, or Rakka, beyond Palmyra, one of which was a coin of Charles VIII. of France, and the other of Maurice of Saxony.

It was Tuesday, November 26th, when we left Palmyra on our way to the Euphrates. The Kaimakam, on the strength of my last year's buyurultu from the Wali Pasha of Aleppo, sent with me one zaptieh, my old friend Ahmed, as escort. Three hours beyond Palmyra I found an inscribed milestone of Diocletian, indicating this to be the road from Palmyra to Arakka, VIII. mile. Near this lay another large milestone of a different sort. Both of these were noticed and described by the Wolfe Expedition. Professor Sterrett, in his report of that Expedition, has published four milestone inscriptions found between Rakka, or Erek, and Tadmor, with a notice of three other fragments from the same stretch of road. I can add to this one more stone, found three hours and eighteen minutes beyond Erek on the road toward the Euphrates. Unfortunately, the inscription on this stone was so broken that it is only possible to conjecture what it was. The late Professor Merriam of Columbia University suggested that it was a stone of Septimius Severus, and the eighteenth milestone from Palmyra. Almost all of the other milestones found to the east of Palmyra belong to the time of Constantine.

In addition to these milestones I observed at certain distances the ruins of ancient guard-houses.

Our course for the first five hours and a half was over the plain, north eighty-five degrees east, with a hill line at our left. Then we turned north sixty degrees east, and entered a country of low and barren hills. Six hours and twenty minutes after leaving Palmyra we reached Rakka, or Erek, ancient Arakka. Here there are at the present day a Turkish zaptieh station and a small village of mud huts. There is running water, but it is strongly impregnated with sulphur. We discarded our zaptieh at Erek, and at Mohammed's desire did not take another. He assured me that now that we were among the bedouin he could protect us more satisfactorily without zaptiehs than with them. Moreover, we should be hampered by the presence of a Turkish escort, which would compel us to stop at the zaptieh stations and follow the regular Turkish route. We encamped in the desert an hour and a half beyond Erek, having passed some time before a large camp of Anazeh Arabs. On the hills to the north of our camp I noticed a few butm (pistaccio) nut trees which were, as I afterwards learned, the outposts of a considerable forest. In their inscriptions, Ashur-bani-pal and other Assyrian conquerors describe this as a forest region. The greater part of these forests has long since disappeared, but some part still exists to the north and east of Palmyra. Through this part of the country, and indeed until we reached 'Anah, we found everything suffering from drought. Along the road were carcasses of quantities of sheep torn by jackals and hyenas.

Mohammed now requested me to discard my pith helmet and wear an Arabic kefieh, as I already wore an Arabic cloak or abbayeh. His intention was to represent me as a Turkish official on his way to his post. The next afternoon, after a ride of six hours and a quarter, we reached the town of Sukhne, the ancient Cholle.

There are still visible here large foundation walls. Near the town are hot sulphur springs. The place itself consists of a half-dozen or a dozen miserable mud houses, surrounded by a mud wall, and containing a small zaptieh station. There were immense camps of Anazeh there, and we were informed that other camps were not far distant. We also learned that the Shammar had been on a ghazu, and had been defeated, and that there were some prisoners in the camp, including a negro slave of Faris. The chief of the Anazeh camp at Sukhne was Ferhan. A little distance away lay another chief, Fadhil. Encamped close to the wall of the zaptieh station at Sukhne was a small caravan which did not dare to leave the place on account of the disturbed condition of the country, and the fighting between the Anazeh and the Shammar. We had scarcely arrived when a demand was made upon us for blackmail, and it proved that Mohammed's boasted influence with the Anazeh was nil, so far as protection for my party was concerned. I absolutely declined to pay anything, telling Mohammed that I had no objection to his doing so if he wished, but as it was part of our contract that he should protect us from the Arabs, I certainly should not repay this, or any similar expenditure.

BLACK CAMEL'S HAIR TENT OF ANAZEH ARAB, IN CAMP AT SUKHNE.

I spent the afternoon exploring the bedouin tents and the sulphur springs of Sukhne. In one hot spring, which had been anciently walled in, apparently as a bath, a number of men and boys were disporting themselves.

Another, not many feet away, was in possession of the women, a few old duennas sitting around to keep guard and see that no man approached too close. The old dames could not, however, prevent the girls and women bathing there from bobbing up to take a look at us. The pool from which the drinking water was taken lay just beneath the little town of Sukhne in such a position that all the refuse of the town must inevitably drain into it. Immense quantities of camels, sheep, and horses were wading in it and drinking out of it all the afternoon, the women at the same time going in up to their knees to fill their water skins and using the opportunity to take a partial bath. Excepting that in addition to its other impurities the water of this pool tasted strongly of sulphur, it was a fair specimen of the water supply of the desert on which the bedouin rely.

That evening several Shammar prisoners came to our tent and asked to be permitted to accompany us on the morrow. Some Anazeh also appeared to give Mohammed messages and letters for Baghdad and various points, and one of them entrusted to him money to be paid. Aftimus and Se'id Abdullah went to the zaptieh station to present my buyurultu and ask for Turkish Government protection. The corporal in charge of the station was unable to read, and believed that the document was a forgery. He argued that if I were entitled to Turkish protection, I should have brought a zaptieh with me. He would only agree to give us an escort on condition that we paid to him a blackmail at least as large as that which the Arabs were demanding. After I had retired to my own tent Mohammed came to me in great trepidation to tell me that Ferhan and Fadhil were both very angry because they had not received a present, that is, blackmail as a ransom for me, and that it would be impossible for us to proceed unless I would pay them something. I told him that it was his part to do that, and

that if he did not do it and I were robbed, he would be responsible, according to his contract; and turned him out and went to bed. The next morning things were still in the same condition, and Mohammed was afraid to proceed. I ordered the camp struck and the animals loaded without delay. The other caravan, which was waiting to see what I would do, at once began to make preparations to go out with us. After breakfast I mounted, took Hajji Kework with me, and rode to the door of the zaptieh station. I reprimanded the corporal and rated him soundly in bad Turkish for his impertinence, showed him my buyurultu, and ordered him to furnish an escort without delay. He treated me with great deference, but still showed some signs of hesitancy, perplexed by the fact that I had arrived without escort. Hajji Kework took him around the corner, told him what a great and powerful man I was, and presented him with ten cents. He returned, made most humble salaams and apologies, and ordered a Circassian zaptieh, named Ahmed, to accompany me to Deir. A few of the Anazeh, those who had entrusted messages and money to Mohammed, gave us escort through the camp and one hour beyond. The Shammar prisoners (with the exception of the black slave, who, it turned out, had blood upon his hands, and to save his life had been compelled to take refuge in the tent of Ferhan) and the other caravan attached themselves to us and we proceeded on our way.

Our course at first lay through a valley. On the north were high, shining, white chalk hills; to the south was broken and undulating country. Gradually the hills to the north grew lower and then receded. Towards noon we were startled by the sudden appearance of a dozen or more Arab horsemen riding down upon us from a ravine to our left. It was a pretty sight to see them coming, their white tunics glistening in the sunlight, their long spears shaking as they galloped down upon us, zigzaging

as they came, after their fashion when on the war-path. At the same moment a much larger force of footmen appeared from behind some low hills to our right. It was evident that we were caught in an ambush prepared for the purpose of plundering us, inasmuch as we had refused to pay a backsheesh for our ransom. What it was purposed to do, we learned afterwards from the report of the incident which reached Damascus, to the effect, namely, that our caravan had been plundered and that the robbers had secured several hundred liras. Mohammed and his men were dreadfully frightened. He had told me that it would be impossible to resist the Anazeh by force, as they could gather from the neighboring camps a thousand fighting men on a few hours' notice. Even the number by which we were now surrounded was several times larger than our own force. My two men, Hajji Kework and Artin, whom I had armed with navy revolvers, sprang from their camels and ranged themselves by my side, apparently ready to fight against any odds, if I gave the word. Mohammed and his guards likewise unslung their old flint-locks and fowling-pieces, and took their station by me, while the two caravans and the prisoners closed up and hurried along with all possible speed. Ahmed, the Circassian zaptieh, did not seem at all concerned, and therefore I felt confident that there was no cause for alarm. He galloped forward to meet the approaching warriors and brought them to a halt about a quarter of a mile away. A parley ensued, and in a few moments they turned and rode sulkily back toward the camp, while the footmen who had appeared from behind the hills to our right disappeared whence they came. I confess I was somewhat surprised to observe that the Turkish Government possessed so much authority over these wild bedouin as to check them from plundering us at the command of one zaptieh. I fancy that if the zaptieh had been a Syrian or an Arab,

instead of an independent and reckless Circassian, we should not have fared so well.

That night we encamped on the plain near a large, deep, dry well, about midway between Sukhne and Jubb Kabakib. There is no water between these two points, and this well was one of several futile efforts which had been made to find it. I was told afterwards that they had dug one hundred and fifty feet without finding a trace of water. The next night we reached the zaptieh station at Kabakib, which lies in a curious bowl-shaped depression several miles in diameter. The well at Kabakib is ancient, and there are remains near the zaptieh station of an ancient reservoir and aqueduct. In the Palmyrene and Roman period this was a road station, and water was stored in the reservoir. The plan adopted was something like that followed in the Moabite region, where they collect the water pouring through the wadis in the rainy season, and store it in a large reservoir for future use. This reservoir was supplementary to the well, the supply of water from which is inconsiderable.

From Kabakib to Deir is a very long station, and Mohammed insisted that it was impossible to perform the march in one day. I declared that it must be done, and that we must start early in order to do it. By way of proving that it was impossible to make the journey in one day and compelling me to encamp again in the desert, Mohammed made such delays at the start that it was eight or nine o'clock before we actually found ourselves under way. I made amends for this by riding behind his camels and prodding them on, so that we travelled at a much faster rate than usual, in spite of all Mohammed's protestations. Whether it was owing to this rapidity of locomotion or not, I do not know, but one of the camels went mad on the march and came near killing a muleteer. It was long past dark when we finally reached Deir. Here we rested one day. I found a new use for

the Kodak, turning it into a weapon to scatter the mobs of rude boys. The mystery of the unknown overawed them.

My intention in taking the route from Beirout to Deir had been, as already stated, to explore the roads between Palmyra and the Euphrates. I had intended to turn from Sukhne northward through Tayibeh to Resafa, which is known to have been a line of Roman frontier stations, or else southward, from Sukhne to Salahieh, between which points a route was represented on Kiepert's map. Owing to the hostile attitude of the Arabs at Sukhne I failed to accomplish my purpose. At the time I congratulated myself on my ingenuity in extricating myself from their clutches without paying blackmail. Now I perceive that my course was a foolish one, and that it would have been far better for me to have placed myself in the hands of Ferhan or Fadhil, paid a small backsheesh of two or three liras—for I am sure that I could have bargained with them for that amount—and obtained escort from them to the places that I wished to visit. I had hoped that even though I had failed in exploring one of these two routes I might have been able to take the road from Kabakib to Rehaba, thus saving myself two or three days, and exploring a new road, but this had also proved impracticable, as the zaptieh could not accompany us over that route, and Mohammed was unwilling to take the responsibility of guaranteeing our safety, there being so many hostile Anazeh and Shammar in the neighborhood. I have no doubt that the old caravan road from Palmyra reached the Euphrates, not at Deir, but at Rehaba; and Mohammed and others assured me that that is the road regularly followed by native caravans at the present day. Kiepert's map of the region between Palmyra and Deir proved to be so far incorrect and misleading that it represented a natural valley running from one of these places to the other. There is no such valley in

existence, except in the immediate neighborhood of Sukhne. From Erek to a point some distance beyond Sukhne the country is first hilly and then undulating. After that it is level, with occasional low hills visible in the distance.

From Deir to Baghdad my route differed little from that of the preceding year. We found cholera cordons in existence between Deir and Meyadin, and again at Abu Kemal, but were informed that the cholera had long since ceased in the Baghdad vilayet, and that the cordons were only maintained for the purpose of levying blackmail on unfortunate travellers. The whole country was in a somewhat unsettled condition, and more than once we found our zaptieh escort not only desirable, but necessary to prevent us from being plundered. At Abu Kemal one of the zaptiehs of the station informed us that the bracelets of the wife of Faris, Sheikh of the Shammar of the Khabor, were in the hands of the Kaimakam of that place, that is to say, he had received them as a present from Faris, in return for which the latter was permitted to rob travellers at his pleasure.

I did not on this trip stop at the barrack stations, but, as a rule, encamped at convenient points along the river between stations, which I found to be far pleasanter than the method pursued on our first trip. We also followed the river somewhat more closely, visiting the island towns of Alus and Jibba. I had intended to stop a day or two at Salahieh and Jabrieh to make *sondations*, but our progress had been so slow and the delays so many that I could not afford to take the time for this purpose, but was forced to hurry on as fast as Mohammed and his camels could go. The weather was very dry until we reached 'Anah. After that it became rainy and uncomfortable, and at Hit Mohammed proposed to me to cross the river and go down on the other side, which is the regular postal route of the desert camel-post between

Damascus and Baghdad. According to him, in the rainy season the country between Hit and Kal'at Feluja, on the south side of the river, is almost impassable, owing to the mud. Camels can walk on anything but mud. On mud they slip and slide, and fall down and injure themselves. Mohammed told me that in a similar season he had lost some thirty camels on that road. I was quite ready to consent to the change; in the first place, because it would enable me to see a new country and explore a new route; and in the second place, because I had learned that Mustafa Assim Pasha, the Governor-General of Baghdad, had been removed, and was now between Kal'at Feluja and Hit on his way back to the coast. It was currently reported that his removal was due to complaints made against him by me at Constantinople, and I feared that he might believe this to be the case and have an unfriendly feeling toward me. In reality he was removed on account of a conflict with the religious leaders of the Baghdad vilayet, and with the Jews of that place. One of the Jewish chief-priests had died and the Jews wished to bury him in the tomb of Joshua, son of Jehozedek. Their attempt to do this resulted in a conflict with the Moslems, who, as I have already stated, claim this tomb as the tomb of a saint of theirs, named Yusuf. The Jews succeeded in forcing their way in and burying the priest where they wished. The Moslem authorities undertook to force them to remove him, and the Jews refused to do so. A number of them were thrown into prison, and then began what they claimed was a persecution on the part of the Government. It was impossible for me to get at the bottom facts in the matter. Both parties seem to have acted unwisely, and after popular indignation had been aroused I have no doubt that the Jews were abused. The British Consul-General, referring to the matter later, seemed to feel little sympathy with them, however, and asserted that they had contrived to

turn the persecution in Baghdad to their own advantage.

The contest with the Naqib, or Najib, as the word is pronounced in Baghdad, was of a different character. This office was created originally for the purpose of invesitgating the claims of the Se'ids, that is, descendants of the family of the prophet, and registering those who were entitled to wear the green turban. At a later date the Naqib contrived to secure control of the immensely rich shrine of Abd-ul-Kader, and little by little made himself a power in the vilayet second only to the Wali Pasha, if even second to him. Mustafa Assim attempted to curb the Naqib's power and deprive him of some of his prerogatives and gains, with the result that he was himself removed from office.

The river was much lower than in the preceding year, but it took us a half a day to cross it, ferried over in the pitch-smeared boats of Hit. Then Mohammed insisted on camping for the remainder of the day at Turbah, opposite Hit, to rest and dry in the faint sunshine the things which had been wet by the rains of the last few days. This gave me an opportunity to explore Hit somewhat more thoroughly, and as Dr. Aftimus was asked to give medical advice, I was able to penetrate the houses of some of the natives, and even to sit upon their roofs. All the work of the town seemed to be done by the women, and at two points there was a constant procession of them the whole day through, going to the river and back, carrying water in wicker baskets smeared with bitumen. The men and boys were very idle and extremely fond of playing marbles with the knuckle-bones of sheep. That and sitting still seemed to be their principal occupations. Nevertheless, the town appears to be thriving, as towns on the Euphrates go, and a considerable number of new palm-trees are set out every year. I inquired diligently for antiquities. The people assured me that they found

" idols and gold coins " in digging for earth and stones in the hill by the Serai, but they were able to bring me nothing but silver and copper coins, Parthian, Byzantine, Kufic, and Arabic.

We started from Turbah the next morning at five o'clock, and after travelling for eleven hours and a half, most of the time on the edge of the pebbly hills which stretch back in great grassless prairies, but part of the time on the alluvial surface of the river bottom, fifteen feet or so below the desert plateau, we reached some miserable shallow wells with troughs by the side of them, called, we were told, Umm-el-Jemali, or Mother of Camels, where we encamped for the night. There were a couple of caravans of Anazeh here, about whom Mohammed felt very uneasy, the more so as our zaptieh had left us to cross the river to the next station, Ramadieh, promising to send us another zaptieh thence. The only thing of interest which I had observed during that day's journey was a naphtha well, not very far from our starting-point. So far as I could ascertain, the only use which the natives make of the crude oil is medicinal. It is considered good for the sore backs of camels. I presume that borings anywhere in the neighborhood of Hit, on either side of the river, would find abundance of oil. The same is true of Samawa, lower down, and probably of the neighborhood of Haditha, as well as of several other localities along the Euphrates.

That night a violent storm broke upon us, and toward morning the east wind became very violent. The rain poured down in torrents, and there was loud and incessant thunder with no lightning, a curious phenomenon which I had observed in the case of another storm the preceding year. The water poured into our tents, and we were obliged to cover everything with rubber. It was impossible to start the next day, and we remained in camp. There was not a constant downpour of rain,

but a succession of violent windstorms, accompanied with deluges of rain and lightningless thunder. The barometer was irregular, rising to 76.30, and sinking suddenly to 75.90. All of our things were huddled together in the middle of the tent. Cold and half-wet, we could do nothing but sit still, not even read or write. Our two servants were drenched, but cheery, active, and serviceable. Every now and then one or two of the tent-pegs pulled out and the tent almost blew away. Then the dam about the tent would break and a stream of water come pouring in. Every half-hour or so we had to rush out and make repairs. Our Arab camel drivers and guards were huddled together about the baggage hopelessly demoralized, lying on the ground wrapped in their abbayehs, so motionless and bundled up that I could not tell which were men and which bales of goods, except by stirring them with my foot. Guns, shoes, and narghilehs lay about in the mud. Mohammed's tent was almost wrecked. Once we heard a loud shouting. The wind had torn a large hole in the roof, and Se'id Abdullah was holding on to the cloth and crying that the end had come, and praying vehemently thus: "O Lord! O Lord! The wind has torn a great hole in our tent, and we have not even a rag to patch it with! O Lord! what shall we do? O Lord, help us! The end has come!" I believe that the Arabs are really more afraid of the fury of the elements than of the dangers of war. They are entirely helpless and useless in the face of such a storm. I wandered over to the Anazeh camps near by and found the poor Arabs without tents, lying like dead men on the ground. An enemy could have murdered the whole camp without a man stirring. No one would turn a finger, and even the camels were left to care for themselves. After the storm I learned that these Anazeh were on their way up from Irak, their camels loaded with dates. Their chief was Turki Bey, who was killed the

next year in a battle with the Rowali. They had suffered severely from the cholera. The only places, so far as I could learn, which had been free from the ravages of that plague were Hit, where the sulphur, so abundant in both the atmosphere and the water, seemed to have acted as a disinfectant; and Nejef, where I could only suppose that the people who were alive had become so indurated to infection of all sorts that they were impervious, which was the conclusion reached also by Dr. Bowman, the Residency surgeon at Baghdad. The cholera is, I believe, endemic in the Euphrates valley. Formerly the bubonic plague, or black death, was also endemic there. The last outbreak of this plague was in 1875, and it is claimed that it was completely stamped out at that time. Certainly there has been no revival of it since, unless the present outbreak in Bombay can be traced to the Euphrates marshes.

The next day, damp and wet, we pressed on to Saklawieh, more than eleven hours from our camp at Umm-el-Jimali, at the slow rate of Mohammed's camels. A couple of hours after starting we passed a small square enclosure surrounded by mud-brick walls, which we were informed was called Umm-er-Rus, or Mother of Heads; and Mohammed related an apocryphal story of a terrible battle which had taken place there between the Shammar and the Anazeh. Outside of the fortified square there were a couple of small mounds, and the neighborhood was intersected by canals, two of which were large, and had been important. Across these canals from the fortification there was a small tel called, we were told, Tel Mohammed. Inside the fortified square no remains of houses were visible, but potsherds in abundance were scattered everywhere. I have no idea what the place may have been. The remains which we saw were presumably Arabic. I had intended to telegraph from Saklawieh to Baghdad, but had the same experience as the

year before, finding the telegraph wires broken. The next day I endeavored to find at Saklawieh a guide to take me to the ruins of Sfeira, which must be, judging from the name, some ancient Sippara, but no one in the place could guide me thither, neither was there a person to be found who knew where the ruins of 'Anbar were. As I was in a hurry to reach Baghdad, I concluded to forego Sfeira for the nonce; and Aftimus and I, leaving the caravan to follow in two days, pressed through to Baghdad, reaching there by hard riding over the muddy roads just before dark.

CHAPTER II.

BACK TO NIPPUR.

A Faithful Official—The Mushir—Our Commissioner—An Ugly Trick—A Curious Forgery—The Consuls—Our Workmen—Nebuchadrezzar's Quay—Proposal of Marriage—Arab Stories—Frank Magic—Among the Marshes—The Governor—A Bribe Demanded—A Jolly Rogue—An Honorary Prisoner—A Drunken Prefect—Appearance of Water—French Leave.

I REACHED Baghdad December 16, 1889. Haynes and Noorian were in good condition, and both of them ready to accompany me to Nippur. Haynes had been busy procuring stores and boxes for our antiquities, which latter were very dear, as there is no wood in the country. Potatoes also were very dear, as none are grown in Babylonia. Nevertheless, a large supply had been laid in for our consumption, from the truly American feeling that they are the staff of life, a necessity, and not a luxury, at any price. The goods which I had shipped from Constantinople were in the custom-house and had been there for some time; but through some oversight Haynes had not been informed of the fact, and they had not been taken out and repacked. There was much breakage; one of the boxes had disappeared altogether; and the photographic supplies, which were in a different shipment, had not arrived at all. I found not a few changes among our friends and acquaintances, and some gaps caused by cholera. This had evidently raged fearfully in Baghdad. Among the few who had remained at their posts in the plague-smitten city was the

head of the postal and telegraph bureau, M. Latinek. Haynes had informed me by letter, while I was in Constantinople, of his courage and devotion; and in view of his brave conduct, and of the fact that he had been very serviceable to the Expedition, I secured for him a decoration from the Sultan. In his gratitude for this he now revealed to me the private telegrams which had passed between the Wali Pasha and the government at Constantinople, from which I ascertained definitely, what I had already known in part, that the Governor-General had in every way opposed our return to Baghdad, and had taken no steps whatsoever to chastise Mekota for his conduct. In Mustafa Assim's place, the Mushir, or Military Commandant of the vilayet, Ahmed Tewfik Pasha,—known as the little hero of Plevna, because he was the engineer who constructed the defences at that place,—was acting as Governor. He received me very pleasantly, but knew absolutely nothing about our affairs, and had received no instructions whatever from Constantinople concerning us. It looked at first as though we might be left to our own devices, to go to Nippur without a commissioner, and with no surveillance and no guard from the local government. Finally, however, Ahmed Tewfik decided to telegraph to Constantinople. He did me the honor to call on me at the consulate, and became so interested in what we had to show him, especially the Kodak camera and the views which I had taken with it, that he stayed over an hour. At one of my calls at the Serai, the finger which I had lamed near Damascus being done up in a rag which Noorian had fastened for me with a pin, the Mushir, since he would shake hands with me, and shake hands in a manner unlike anything I had ever experienced before, contrived to catch himself on the pin. He uttered a loud cry and jumped fully a foot from the floor, and everyone in the Serai, thinking for a moment that his Excellency had been assassinated, did the same. I could scarcely

restrain my laughter until I had left his presence; but, ridiculous as the matter was, I was afraid that it might have serious consequences and put him against us. Fortunately he was too sensible a man to harbor a grudge for such an accident. The only point on which we came into conflict at all was with regard to the consul. He refused at first to permit the consul to accompany me to Nippur, saying that it was not in my permission, and that the law did not allow consuls to take part in such work. This difficulty, however, was entirely due to the unfortunate manner in which the matter had been presented to him. I took Noorian and went to see him privately, and protested very solemnly against the salary which he had named for the commissioner, an amiable and pleasant old gentleman, Mohammed Salih Effendi by name, a protégé of his. This man had been nominated for mudir at some town in the vilayet, at a salary of ten liras a month. The Mushir now named him as our commissioner at a salary of twenty liras a month. But while this salary was really excessive and absurd for the services which the good old gentleman rendered, my protest was intended not so much to change that as to remove the Mushir's objections to the consul's accompanying me. It had the desired effect. I agreed to accept Mohammed Salih Effendi without any further objection, and the Mushir, on his part, found that it was quite proper for the consul to accompany me.

One unfortunate occurrence there was during my stay at Baghdad. I had brought with me, as stated, two cameras for photographing persons and scenes instantaneously, a Kodak and a Krugner. As Haynes preferred the latter, I turned it over to him, keeping the Kodak for my own use, and it remained with me in the room which Haynes and I occupied together. Up to my arrival at Baghdad every exposure which I had made turned out well. After that time I made some four hundred or more

exposures, partly at Nippur, but chiefly during my journey among the Arabs south of Nippur, and at the various ruin mounds which I explored. These were all sent at once by mail to America for development, and all proved to be failures. There was a delay in informing me of this which prevented me from ascertaining until too late that something was wrong with the camera. It was then submitted to the Eastman Company, from whom it had been purchased, and they reported that someone who understood photography had unscrewed the outer lens, removed the inner lens altogether, and then returned the outer lens to its place. The result was that it looked from without precisely the same as before, and yet was in fact absolutely worthless. This was done while we were at Baghdad, whether out of spite or envy, but I naturally did not know of it until I had returned to America.

While in Constantinople I had seen a small amount of antiquities which were reported to be the result of the Turkish excavations at Abu Habba. In Baghdad I was informed that these were but a small part of what had actually been excavated, and that the greater part had gone into the hands of the native antiquity dealers and been sold in London and St. Petersburg. Some few pieces ultimately found their way to the United States. One of the dealers, Khabaza, whom we had met the previous year, was anxious to show me some antiquities in his possession, and I visited him in his house in the Jewish quarter. Among other things he showed me in all innocence a curious forgery in the form of a tablet, at the top of which was written in cuneiform characters—Ilu Kha-ba-a-za, with the personal determinative before it, that is, a person named god Khabaza. It was from the same shop as those which we had seen at Deir the year before, and was done either in India, or by some one of Indian connection who knew a little Assyrian, and had a fine sense of humor.

Seal Cylinder and Impression. Shamash, the Sun-god, holds a vase; above is a crescent, with the emblem of the Sun within. Before the god stands a worshipper, and behind him, Aa, wife of Shamash, in her usual attitude and dress, except that the gown is plain instead of flounced. From an unknown Babylonian ruin mound. Date, circa 2500 B.C.

Colonel Tweedy had returned from furlough during my absence and resumed his place as British Consul-General. He proved to be an admirable Arabic scholar, and maintained friendly relations not only with the Arabs of Babylonia, but also with the Nejd. He was able to give me much valuable information and advice. Dr. Bowman, the Residency physician, furnished us with some useful medical supplies, and instructed both Aftimus and me in the actual medical needs of the country, going over our pharmacopœia, and writing out for me directions which proved most useful later. The Russian Consul, a new appointment since my last visit, extended to us many hospitalities. With M. Pognon I endeavored to arrange a visit to Nippur, and made an application to his government for leave of absence to be granted him for that purpose, but in vain. He was always ready to examine for me such copies of inscriptions as I sent him, and translate for me such things as I could not myself translate. In this way he rendered me invaluable services later.

On one of my visits to the Serai, I met a French engineer who was laying before the Wali plans for a permanent bridge over the Tigris, to take the place of one of the two primitive bridges of boats which now connect the two parts of the city. Where the money to build it was to come from was the question. Everything was already overtaxed. There was a tax of two piastres on each palm-tree, a tax on each bee hive, a tax on each fish caught, a tax on each domestic animal and on each beast of burden. In fact, everything was taxed, nominally at least, and yet there was no money.

On the way down we had heard much about the Sleib, or Sullabeh Arabs, a curious tribe or race of gazelle hunters, who live among the bedouin but are not of them. They were reported to be descendants of the Crusaders, who had fled to the desert after the capture of Tripoli by

the Saracens, but I fancy that this tradition is due to the resemblance of their name to the Arabic word for cross. I never had the good fortune to see any of them for myself, just missing them on several occasions. As the result of my inquiries, I learned that they are few in number, but scattered over a vast territory from Mosul southward to the Nejd. They are not good Mussulmans, and their customs are different from those of the other Arabs. They are never found together in any numbers. They are neutral in all wars, passing freely between the camps of hostile tribes. The other Arabs do not intermarry with them. They are small of stature, the facial type is rounder than that of the Arabs, and blue eyes are not uncommon among them. They are very poor, living chiefly by the chase, and dressing principally in skins. Occasionally they possess a few donkeys, but never camels, sheep, or horses. They seem to be a remnant of some sort.

Our caravan left Baghdad on the last day of 1889, and we followed on January 1st, both parties reaching Hillah on the second of January. At Khan Mahawil I found a number of our workmen from Jimjimeh awaiting us. They endeavored to kiss our boots and stirrups. We had been a gold mine to them, and although when they left Nippur one and all had stated that they would never, under any circumstances, return, all were now anxious to go back upon any terms. At Jimjimeh they had prepared a feast in our honor, of which Noorian and I were obliged to partake. During the summer Abbas and a few others had gone to Nippur privately, with the intention of digging there on their own account. Just at that time Berdi was murdered, and Hamud-el-Berjud showed himself so unfriendly toward them that they left without accomplishing anything. Abbas's companions, as well as all whom I suspected of having been concerned in the robbery of the trenches the previous year, and all who

had been lazy, quarrelsome, or unsatisfactory, I refused to re-engage. Abbas, in spite of his iniquities, I pardoned, as he was the most skilful and capable man whom we had. Moreover, his whole family were useful, and it might have been difficult to control the Jimjimeh men without his father, Jasim.

The rains which had fallen in the last two weeks had not been sufficient to make good the drought of the summer. What was left of the Euphrates seemed to have deserted its original course almost entirely and poured itself through the Hindieh canal into the Abu Nejm and other marshes. The old quay built by Nebuchadrezzar along the eastern bank of the river at Babylon was exposed. One could see there the bricks bearing his name, laid in bitumen. The existence of this quay along the present bed of the river shows the error of Rich and others, who in their maps of Babylon mark the old bed of the Euphrates as going through the city itself. In point of fact the channel is the same now as then. We were told that a week or two before there had been absolutely no water in the river, and the people of Jimjimeh and other villages as far southward as Samawa, had obtained their water by digging wells in the dry bed.

On our way to Jimjimeh we passed over Babil once more. The view from the summit of the mounds was charming, and I can well believe that in the days of its grandeur Babylon must have seemed a paradise. Below Babil we rode along the river-bank for a considerable distance, passing over some low mounds called el-Ghareireyeh. Some distance inland from these was the mound of Hameirah. On the mound of Mujellibeh we observed some very massive walls of unburned brick, which had been partially laid bare. Abbas showed me a corner out of which he had taken a barrel cylinder, while two or three more had been found in holes in the face of the wall. At the chief ziaret on the mound of Amram we

were obliged to pay a friendly toll to the Imam. Inland from this mound I noticed a curiously shaped roof-like heap of earth formerly called Sobeit, but now known, I was told, as Bahnan. In this mound were found several of the phallic-shaped inscribed stones with zodiacal emblems, known as boundary stones.

We crossed the river opposite Jimjimeh, wading through eighteen inches or two feet of water, and rode down to Hillah on the other side. Our stay at Hillah was very brief, and would have been briefer, had it not been necessary to change our plans somewhat on account of the dried-up state of the country, and the uncertain and contradictory information with regard to the possibility of resuming work at Nippur at present. We decided to store a considerable portion of our material under charge of a Jew named Shaoul, whom we had employed as agent the previous year,—who contracted to bring it to us by boat as soon as the water should rise sufficiently in the river,—and to take with us only what was immediately necessary. We employed a few men at Hillah, as before, and among them a new and very useful man, Jasim Hammadi by name. The head of the Hamals, or street porters of Hillah, came to me and begged that I would command Jasim of Jimjimeh to sell him his daughter Sultana, our camp beauty, as wife. He regarded me as the sheikh of my people, and supposed that I had authority to command my men as any sheikh of the country would. It seemed that Jasim's family were not agreed with regard to the girl. The father and Abbas, the elder brother, were not unwilling to sell her, but the younger brother, Tahir, who was unmarried, would not consent, as he wished to trade her off for a wife for himself. The wife whom he had selected was objectionable to the rest of the family who, on their part, would not consent to the trade. I felt that the matter was too complicated for me, and refused to exercise my authority as sheikh in the matter.

Fortunately for us, the Mutessarif of Hillah, Yaya Bey, was absent in the Abu Nejm marshes collecting the rice tax. His deputy had no instructions about us, and therefore unhesitatingly furnished us an escort, and permitted us to depart without objection. Indeed, in order to show us greater honor, he sent a battalion of soldiers to escort Haynes an hour beyond the city when he left. As before, Haynes, with the workmen of the caravan and an escort of zaptiehs, took the direct road to Nippur by way of Kheygan. Noorian, the commissioner, and I, with one servant, started to find the Mutessarif in the marshes, as the Mushir had informed us that it was necessary to see and arrange with him. Riding out of Hillah we passed a woman who let her veil partly fall, then prayed aloud to Allah to forgive her for letting an infidel see her face. At Imam Jasim we observed great quantities of new graves, evidences of the terrible ravages of the cholera. We spent our first night in a village of the Jebur Arabs, close to the small but promising-looking mound of Zuneh. This mound is about twelve metres high, and a hundred long by fifty broad. A little beyond this was the small mound of Abu Jarun, from which they get both seal cylinders and Alexander gold coins. Turkish officials were among the Jebur collecting taxes, and the people were loud in their complaints. Their crops seemed to consist of millet and barley, and the greater part of them had nothing but millet bread to eat. This was so indigestible that we, after experimenting upon it at Nippur the previous year, had designated it by the title of "Nippur bricks." But poor as the people were, they were still compelled to pay their taxes, and, as is usual in civilized as well as uncivilized countries, the poorer the people the larger the proportionate share of taxation which they paid. One reed village not far away caught fire that evening and was burned up in an instant. So rapid was the conflagration that if the people had possessed any-

thing except what they wore, and possibly one or two miserable rags on which they lay at night, they must have lost it all. Not infrequently some are burned to death in these conflagrations.

Sitting about the fire in the muthif that evening, Noorian drew the chief on to tell stories. He informed us that in the days of his father, fifty or sixty years before, a Frank came to Nippur and went and stood on top of the hill. Then he put a strap on the ground and commenced to read in his book; and he read the strap alive, and he read until it crept and crept along the ground like a snake; and then he closed his book and brought workmen, and bade them dig where it stopped. So they dug very deep, and at last they found a golden boat with writing on it. Then he sent a man to fetch this out, but as he took hold of it to lift it a serpent came out and breathed on him, and the trench closed. All this was vividly acted out amid the grunts and excited comments of an interested audience. In part it was manifestly a reminiscence of Layard's visit to Nippur almost forty years before. The strap was a tape-measure, and the book a note-book. In part it was a localized form of certain general magical stories which have been current in the country from time immemorial. The golden boat story, in a slightly different shape, Layard found narrated of Nippur by the Arabs in his time. But the chief's recollections extended not only to the remote past; he had heard also of the Franks who had been at Nippur the year before; and each night, he said, they placed palm stakes in the ground all around the hill. Then they went to sleep, and if a thief came he could not pass the palm stakes, nor could he return; but at the stakes he must stand stiff and cold the night through, and in the morning the Franks would come and catch him. This had clearly grown out of Field's surveying work, where he had used palm ribs as stakes. The Arabs had

regarded that as some sort of magic. As we learned later, several attempts had been made to rob us which had failed because, probably, the would-be robbers became frightened; but on their return, to justify their failure, they had told remarkable stories of the magical fence by which we had prevented them from finding or entering the camp. All of these stories confirmed my opinion that I could control the Arabs of the neighborhood by a proper use of their belief in our magical power.

These Arabs were much interested in our equipments. After we had gone to bed, Noorian lay awake with a toothache, and the Arabs crouched around the fire and talked. One asked the other if the Sultan slept in a bed like ours and wore clothes like ours. "No," said the other, "he wears clothes like ours, only they are all white, and he covers his face, and rides in a chariot, and sometimes he dresses all in gold."

The next day we passed several ruin mounds, the most conspicuous of which was Umm-er-Rua, the only one for which we heard a name. About four o'clock, we reached the miserable, but picturesque mud village of Umm-el-Baghour, among the marshes. To the north, as far as we could see, the Abu Nejm stretched away like a lake. We entered the town on a low causeway between the Abu Nejm on the north, and less extensive marshes on the south. The land on which the town itself lay was scarcely higher than the marsh about it. Water fowl seemed innumerable, and not very shy, but I did not observe that they were hunted by the natives. The marshes seemed to abound in fish, some of them of enormous size, five feet long. Quantities of these immense fish were exposed for sale.

The Mutessarif has a serai at Umm-el-Baghour, and there we were received at once. Yaya Bey was a thoroughly corrupt man. I learned that the gun which the Arabs had taken from me was in his possession, and I

made no doubt that he received a bribe for representing that the burning was an accident, and exonerating the Arabs from the charge of plundering our camp. It now transpired that he had done nothing whatever toward providing for our possible return to Nippur. He said that we could only go there with a guard of one hundred or two hundred soldiers, and that we must wait in Diwanieh until he had summoned the Affech chiefs and taken pledges for our security, and obtained from the government permission to send soldiers to guard us. This, he said, would take at least five days, but I concluded that it would more likely take forever. What he wanted was a backsheesh from us, and he actually asked me to send to America for some rifles for him. I asked him if I should have them sent direct to him, and he replied that we must smuggle them through the custom-house as for ourselves, and then bring them to him. In that event he would do anything and everything for us. I neither promised nor refused. He spoke of the fire as an accident, but I told him point-blank that Mekota and the Affech had burned the camp and robbed us, and that there was no use in making a pretence that it was not so. He was quite indignant at the conduct of his deputy in Hillah in allowing Haynes to go to Nippur. As I could not change his determination that I must stop at Diwanieh until he had obtained from the government permission to send soldiers, and had also taken pledges from the Affech chiefs, I thought it better to pretend to submit; because once at Diwanieh it would not be difficult to find my way out to Nippur, whereas at Umm-el-Baghour I was rather in his power.

As the serai was very small and did not afford more than sufficient accommodation for the Mutessarif's suite, he billeted us on the Kaimakam, Tahir, a Kurd by birth. This man astonished me by the information which he possessed, so unusual for a Turkish official. He had

several books which he knew well, one of them being a Persian paraphrase of Herodotus. He was extremely interested in our explorations, and asked me many questions about antiquities, even extracting a promise from our commissioner that he would write to him concerning the results of the work. The Mutessarif had abused Bedry Bey, whom he called a bad man, and the late Wali, over whose downfall he openly rejoiced. The Kaimakam joined in the abuse of both of them, but he also abused the Mutessarif and the government in general. He was himself, according to all accounts, a jolly, amiable rascal, who could not by any means live upon his salary, and was always in debt. He was, therefore, obliged to appropriate as much money as he could, not for the purpose of enriching himself, but only in order that he might spend right liberally and make everyone about him have a royal good time. He entertained us handsomely, and after dinner, as we all sat about smoking narghilehs, he gave us some interesting information with regard to the action of the government the preceding spring. It seems that as the Kaimakam of Diwanieh had refused to report, as the Mutessarif directed him to do, that the burning was an accident, but persisted in telling the truth, he was removed, and Tahir was sent to make a report in his stead; which report was practically prepared for him beforehand by the Mutessarif. He evidently regarded himself as quite an old friend and comrade because he had made the lying report to the government in our affair, and had no idea that we could by any possibility bear him a grudge for what he had done, at the order of the government, in order to turn an honest penny. One thing, however, perplexed him very much, and indeed it was a question of his with regard to this which led to his narration of the whole incident. In the confidence of our after-dinner smoke he asked me what the word "pepper" meant. It at once

flashed across my mind that when I had cabled from Diwanieh to the minister a statement of the treachery of the Arabs and our loss, I had added at the end, "Cable Pepper," meaning thereby Provost Pepper, the President of the Fund. As Diwanieh was a Turkish station only, I was compelled to telegraph either in Turkish or Arabic, and must reach the Committee at home through the minister in Constantinople. I therefore replied to Tahir: "Ah! it was you, then, who investigated that matter, and you examined the telegrams, and did not know what my telegram meant." When I explained it to him he roared with laughter, told me how much mystified they had been, how confident he was that it was some cipher with hidden meaning, and then narrated the story of the investigation and report, as I have given it above. He further told us that the Arabs spoke well of us, but complained bitterly of Bedry, and that he had written in his report advising that Bedry should not return.

Hajji Tarfa was staying at his farm on a Sennieh of the Sultan in the immediate neighborhood, and called during the evening. Although he was close to Umm-el-Baghour, the Mutessarif had not summoned him or taken any pledge from him. That was clearly a pretence on his part. I called his attention to this the next morning, and asked why he had not summoned Hajji Tarfa before him at once, seeing that Hajji was there. He insisted that I must be mistaken, and remained inflexible in his determination that I could not go beyond Diwanieh. He prepared a letter to the Kaimakam of Diwanieh, stating that we were not to be allowed to go to Nippur; and after a hospitable breakfast with the jolly rascal of a Kaimakam we set out for Diwanieh, about noon, accompanied by a zaptieh bearing the Mutessarif's order.

At Diwanieh all was changed since our last visit. There was not a drop of water in the Euphrates, and had not been for six long months. The people drank water

from wells dug in the dry bed of the stream. The same condition prevailed in the Affech marshes, we were told. The wells ran dry every few days, so that new ones must be dug. Our good old Kaimakam had been removed. One of our entertainers of the previous year had gone insane, another was in the marshes collecting conscripts, and the rest were scattered. Half of the population of the place seemed to have deserted it on account of the drought. The cholera there had been relatively light, but at Umm-el-Baghour and in the Affech marshes, we were told, it had been very severe. The new Kaimakam, Yakob Effendi, was openly corrupt, and an offensive braggart and drunkard as well. He abused our kind old friend, the late Kaimakam, and in fact everyone. We saw him take one bribe, and no man who came on any business could hope to have it attended to until he had paid the Kaimakam. It was hinted to us that a backsheesh might expedite our business, but we preferred to pursue another course. His drunkenness turned out in a certain way to our advantage, for after he had taken too much rakee he revealed the fact that the soldiers who were demanded for our protection were really not wanted for that, but for the purpose of reducing the Affech. Naturally I did not desire to act as a cat's-paw to help the Mutessarif and the Kaimakam pull the chestnut of a big backsheesh out of the Affech fire, and I determined that if Haynes found sufficient water in the marshes to render work possible, I would take French leave and go on, the Kaimakam and the Mutessarif to the contrary notwithstanding. The Kaimakam insisted upon sending out zaptiehs to bring in Haynes, together with our workmen and our luggage, and asked me to write a note summoning him to Diwanieh. I wrote a note, but it was of a slightly different character, intimating that if it were practicable to stay at Nippur I should not take it amiss if he refused the summons.

The next day a little stream of water came trickling down the Euphrates, and the whole town turned out to welcome it. The Kaimakam had chairs placed on the bank and we watched it come. It was clear to me that as the water had reached Diwanieh, it must also reach the Affech marshes through the Daghara canal. Nevertheless, I thought it wise to wait a little longer for word from Haynes. In the meantime our commissioner, who was quite agreed with me in my view of the matter, wrote a letter to the government at Baghdad, which I supplemented by a similar document, stating the facts, and the complete failure of the Mutessarif and the Kaimakam to take any steps to provide for our return to Nippur. The next morning a letter arrived from Haynes, saying that he was safe at Nippur, and that Sughub and the es-Sa'id had brought him there. A great crowd of Arabs had accompanied him from Hillah, Jimjimeh, and Birs Nimrud, eager for work, for there was no money in the country and no employment. He protested against sending soldiers, saying that this would be sure to cause difficulty, and probably would bring the Expedition to an end, and expressed his opinion that we should be perfectly safe with six zaptiehs.

Noorian translated this part of the letter, which I indorsed, and the Kaimakam forwarded to the Mutessarif. The water in the Euphrates had now become quite a stream, and I demanded of the Kaimakam permission to start the next morning. He refused it, and I finally told him that I would stay only if I were detained by superior physical force. He endeavored to dissuade me, and despatched a messenger to the Mutessarif in hot haste, but I had taken care to inform him of my coming departure at too late a date to make it possible for the messenger to reach the Mutessarif and return in time to be of use. The following morning he attempted to delay me under one pretext and another, but I refused to be detained.

I mounted my horse and prepared to start without escort. He had gone to the extreme limit of what he dared, and when I actually started he sent a zaptieh after me as escort. We found all the canals and marshes dried up, and were able to take a straight course to Nippur, making the distance between that and Diwanieh only five hours, or somewhat less than fifteen miles. What water had come down the Daghara canal had been dammed first by the Daghara Arabs, and then by the el-Behahtha, and the marshes were as dry as a bone.

CHAPTER III.

A SUCCESSFUL CAMPAIGN.

Building Camp—A New Plan—My Chosen Protector—Precarious Situation Useless Zaptiehs—A Stolen Donkey—An Exhibition of Fireworks—Recognized as Magicians—A Guarantee Paper—Lack of Water—Sickness—A Deluge—Thunder and Lightning—Female Ghouls—Worry—Remarkable Finds—Cause of the Cholera—Friendship with Tarfa—Medical Practice—Size of Excavations—Arab Sheikhs—Shammar Arabs—A Threatened Raid—Neighboring Wars—Domestic Troubles—A Strike—Administering Justice—Food Supply—Money Difficulties—A Gold Tooth—Wages and Workmen—Making Maps—Hunting a Lion—Credulous Commissioner—Arab Entertainments—A Chain Gang—Outlying Ruins—A Parthian Tower—Exporting a Coffin—The Blood Feud—Our Escape—Friendly Relations—Farewell—The Finds.

ON our arrival at Nippur we found Haynes encamped to the south of the western hill. Sughub, the es-Sa'id chief, with fifteen warriors, had given him escort, and both Sughub and the el-Hamza had strongly advised him to occupy this position, from which he could see and be seen by the Affech. The nearest well was some two miles or more away, in a canal by Berdi's camp. It had been my intention, in order to render us somewhat more secure against fire, to build the camp this year, so far as possible, of adobe. This intention was frustrated by the lack of water, without which adobe could not be made. In lieu of this we had our men dig holes three to four feet deep, and with the earth thus excavated, and ancient bricks dug out of the ruins, we erected along the excavated space walls three feet in height, on which we set

Second year's Camp, centre and western parts. On extreme left, Muthif. In centre, with door to east, our Camp ; about that at considerable distance, huts of workmen. Bake-ovens dotted here and there through enclosure. Behind our Camp, Circus for exercising horses.

peaked frames of poplar poles and palm ribs, which we covered with palm-leaf mats. Our own camp was built with but one entrance, to enable us to guard the better against treachery, while the huts of the workmen were set at a considerable distance away. To render the destruction by fire less possible, the men were compelled to build their huts in straight lines, forming a larger enclosure around our inner camp. Within this larger enclosure, and in front of the gate of our inner camp, or castle, we built, after the fashion of the country, a muthif, or guest house, for the entertainment of visitors, who were thus prevented from over-running our camp and spying out our equipment. I had stated to the Turkish authorities my desire and intention of placing myself under the protection of one chief, and selected as that chief Hamud-el-Berjud. I realized, from my experience of the preceding year, that it was necessary to have the protection of one of the chiefs, and to accept a guard from him. Turkish protection was practically useless. It was, however, necessary to obtain the consent to this arrangement of Hajji Tarfa, the head chief of the region.

CAMP SCENES. OUR MUTHIF, OR GUEST HOUSE. ARAB GUARDS IN FRONT, AND ARAB WOMAN BRINGING BRUSH FOR FIRE-WOOD.

At the outset, I must confess, the situation seemed very precarious. The water supply was so scant and so poor that it was very uncertain whether we could find enough for our large camp. Sughub, on behalf of the es-Sa'id, claimed that he had been neglected the preceding year, and demanded more recognition and a greater share in our work. Ri'a, Mekota's confidant, and his

actual agent in setting fire to our camp, appeared almost the first day with a large number of Affech from Shatt-el-Hosein, Hajji Tarfa's capital, to spy out the land and ascertain what he could secure for himself and his comrades this year. The robbery of the preceding year had aroused the cupidity of all the Arabs, and fabulous stories of our immense wealth were in circulation. Everything was supposed to contain money, even our boxes of provisions. I refused to receive Ri'a. At first Noorian was afraid that this might involve danger, but I was confident that the best way to treat these men was the bold one. Accordingly, by my direction, he told Ri'a that I would not receive him nor have anything to do with him, on account of the crime of last year, and that the accursed money which had been stolen from us would find its way back to us. We should not trouble ourselves to search for it, or to ask about it, for there was a curse upon it which would work itself out. He replied that many had died since we left, to which Noorian responded that many more were going to die. Then Ri'a gathered his men together and went away, and gave us no more trouble.

The Mudir at Affech sent us a message to say that the Affech were unfriendly. The Turkish government sent us word that it would not be responsible for our safety, and from time to time we received similar intimations, as though the intention were, in case of another accident, to be able to show that it had no responsibility in the matter. The Mutessarif sent us, however, eight zaptiehs, who were a burden rather than a help. We placed them at the door of the inner camp, in a hut built for them, so that they might guard the entrance. They showed a tendency to levy blackmail on the Arabs who came to sell us milk, poultry, and the like, thus increasing the price of our supplies. There was more or less friction between them and the Arab guards, which almost ended in bloodshed on one occasion. They were afraid to go

anywhere for us, and even when one of our Arabs stabbed another in a quarrel about a woman they did not dare to arrest him and carry him to the Mudir of Affech. We had to have this done by our Arab guards. They were afraid of the Arabs and the Arabs hated them, and did everything possible to scare and annoy them, telling them that we were going to "sink," and they should all be murdered. Even a conscript, who had escaped from a Turkish troop transport on the Tigris and tramped across the desert to our camp and entered himself among our laborers, openly boasted of the fact, and the zaptiehs did nothing.

Shahin, Berdi's brother, and acting-chief of Berdi's tribe until the latter's little son should be of age, expected, as Berdi's successor, and our nearest chief, to have us in charge and to furnish the greater portion of our workmen. The es-Sa'id made similar claims, and at the outset representatives of both parties undertook to guard our camp. The Thursday night after our arrival these guards were very active, firing their guns and shouting as though we were being attacked by the whole desert. The next morning we found that a donkey belonging to a workman living beyond our lines had been stolen. The guards on being questioned separately all gave the same answer, which sounded like a speech prepared beforehand, that it was not their business to guard our workmen, and it was clear that if they had not committed the theft, at least it was done with their connivance. I sent for Shahin, who declared that he knew nothing of it. Noorian told him from me that he knew who had done it, and so did I. We knew, in fact, that it was his own younger brother who had committed the theft. Shahin was a Spanish-looking Arab, long, gaunt, and haggard, with a restless eye and a manner that suggested insanity. He always impressed me with a sense of poverty and high pretensions. He tried to kiss my

hand and asked me to tell him the name of the thief. I replied that he knew, and that he should see that that night which would show him that we knew also, and that goods stolen from either us or our men would bring a curse on those that stole them. I dismissed him, somewhat alarmed at my mysterious threats, and yet not convinced that there was really anything behind them. Then Noorian and I prepared to give the robbers a lesson. The stories which I had heard in the Bedur camp near Zuneh had thrown light on the precise nature of the magical acts ascribed to us, and afforded me a hint as to my method of action. I obtained a number of straight reeds from the marshes and prepared about eight rockets. Just before sunset, when the men were all in camp and at leisure, so that I was sure they would notice what we did, Noorian and I ascended a high point of the mound near by, he solemnly bearing a compass before me on an improvised black cushion. There, by the side of an old trench, we went through a complicated hocus pocus with the compass, a Turkish dictionary, a spring tape-measure, and a pair of field glasses, the whole camp watching us in puzzled wonder. Immediately after our dinner, while most of the men were still busy eating, we stole up the hill, having left to Haynes the duty of preventing any one from leaving the camp. Our fireworks were somewhat primitive and slightly dangerous, so that the trench which we had chosen for our operations proved rather close quarters. The first rocket had scarcely gone off when we could hear a buzz of excited voices below us. When the second and third followed, the cry arose that we were making the stars fall from heaven. The women screamed and hid themselves in the huts, and the more timid among the men followed suit. As Roman candles and Bengal lights followed, the excitement grew more intense. At last we came to our *pièce de résistance*, the tomato-can firework. At first this fizzled and bade fair

to ruin our whole performance. Then, just as we despaired of success, it exploded with a great noise, knocking us over backward in the trench, behind a wall in which we were hidden, and filling the air with fiery serpents hissing and spluttering in every direction. The effect was indescribably diabolical, and every man, woman, and child, guards included, fled screaming to seek for hiding-places, overcome with terror.

As we crept back to camp we overheard a conversation in the hut of our most intelligent foreman, Obeid, the son of Mullah Kadhim. One man told how, by Allah, last year night-thieves started for Nufar from the el-Budeir and el-Behahtha Arabs, but though they knew Nufar well they could not find it. Another told how night-thieves had sought to rob us and come near our houses, but they could come no farther, for they were bound fast to the spot. The brother of one of them had been there, and it was true, by Allah. All alike agreed that we possessed unknown and mysterious powers. This coup had its effect. Shahin and his followers were subdued, and pilfering was stopped forthwith.

CAMP SCENES. ALWAN, SON OF OBEID MULLAH KADHIM, WITH HUT OF OBEID IN BACKGROUND.

In the meantime, our negotiations with Hamud-el-Berjud and Hajji Tarfa for protection by the former were proceeding. The Mutessarif had evidently been reprimanded for his conduct by the Government and was now proceeding with more vigor. He had come to Diwanieh and sent for the Affech chiefs to take from them a guarantee paper for our protection. One day Abud-el-Hamud

arrived with a letter from the Mutessarif saying that the el-Hamza chiefs had given a guarantee paper for our security, and that we were to employ no workmen from tribes at odds with them. They wished us to discharge all of our Hillah workmen except the pickmen, and to take none but el-Hamza. Moreover, we were to deal with all their chiefs, and not with one only. To all this I objected, and taking Noorian and the Commissioner with me I set off for Diwanieh the next morning to see the Mutessarif and have the matter arranged as I wished. I found both Yaya Bey and Yakob Effendi changed men since my last interview. They treated me with the greatest respect and humility, doing what I wanted as soon as I asked it. The Mutessarif especially, fairly overwhelmed me with courtesy, although he still continued to beg for a rifle and revolver from America. Everything was settled to my satisfaction, and we left the same day to return to camp. The guide lost his way in the marshes, and we were compelled to spend the night in a Dheleyhah camp on the Daghara, where the people were such bigoted Shiites that they would not give an unclean Christian like myself coffee to drink. When I helped myself and drank out of one of the two cups belonging to the camp, they ostentatiously set it aside as unclean, and expected a backsheesh from me to pay for another to take its place.

According to my arrangement with the Mutessarif, Hamud-el-Berjud gave a guarantee paper making himself responsible to restore the double of whatever we lost through thefts by the Arabs. Hajji Tarfa endorsed this guarantee. Hamud and his fellow chiefs were entitled to receive one sixth of the wages of their tribesmen employed by us. In order to make this last condition more valuable, Hamud tried to make me discharge the Hillah and Jimjimeh basket-carriers and employ el-Hamza men in their place; in lieu of this, he asked that the Hillah and Jimjimeh men should be compelled to pay tribute to

the Affech chiefs like their own men. This I declined to agree to, but arranged to pay him privately four piastres a day per man for a guard of twenty men. I refused to accept any workmen from the late Mekota's village. At the desire of the Affech chiefs, es-Sa'id and el-Behahtha workmen were also excluded, although both the es-Sa'id and the el-Behahtha chiefs threatened us with trouble in consequence. About half of our workmen, two hundred or so, were from Jimjimeh, Birs Nimrud, and other towns about Hillah. The other half we agreed to select from men furnished by Hamud from his own village and those of Abud-el-Hamud and Shahin. I would not, however, agree to pay the chiefs for their men, and insisted on dealing directly with the workmen, engaging them myself and paying them myself. The chiefs might collect their tribute as they pleased. In point of fact, they used to come on pay-day and mulct their unhappy tribesmen of one-sixth of the maximum wage which they would receive if they worked the whole week. As it rained often several days in the week, and the men were not employed on those days, the one-sixth sometimes amounted to one half the actual receipts. I allowed no rotation in office, such as had annoyed us so much the previous year, and dismissed at once idle, inefficient, or insubordinate men, holding Hamud to a sharp accountability for their shortcomings. I refused to deal with any chief except Hamud, leaving the rest to fight out their quarrels with him. I also made it very plain to him that it would be bad policy to drive away or kill the goose that laid the golden egg, and that I was that goose and he its guardian. Of course, he was the object of much envy, and was threatened with war on our account several times by those who wished their share of the spoils; but being in league with Abud-el-Hamud and Shahin, and having the backing of Hajji Tarfa, and the moral support of a sort of commission from the Turkish government, he was strong enough to resist

pressure, although he often came and complained to me bitterly of the perplexities and dangers of his situation.

Our efforts to secure water did not at first meet with success. I made two visits to Hamud-el-Bendir, the chief of the el-Behahtha, for the purpose of persuading that tribe to cut their dams and allow the water to come through to our neighborhood. Although they were enemies of our guardians and had no cause to treat us with favor, I was received with much courtesy and my request was granted, or rather, I was permitted to take my own men and myself cut the dams. But there was not sufficient water to come through to us after all. The old canal-beds formed hard dry roads among the tall reeds. The herds of buffaloes, formerly so familiar a sight, had been driven elsewhere, and the few individuals that remained were gaunt and sorry spectacles. The countless wild boars and marsh fowl had vanished utterly. Added to the change of the course of the river, there had been a lack of rain. For almost a year not a drop had fallen. The sheep had perished by thousands, and the people were as nearly despondent as thoughtless Arabs could be. Our camp contained several hundred souls, and we could obtain a precarious supply of drinking-water only by digging wells in the old canal-beds. These quickly ran dry and every few days new wells must be dug. The supply was scant, and the quality was enough to turn a squeamish stomach. Moreover, troops of lazy

CAMP SCENES. ARAB WOMAN CARRYING WATER TO CAMP FROM WELLS IN CANAL-BED.

bedouin would come and camp by our precious wells and pollute them still more. It was, of course, impossible to float a boat, and we were obliged to send to Hillah and bring down by mule loads part of the goods we had left to come by water.

Under these circumstances we were in hourly dread of the outbreak of sickness, and especially of the reappearance of cholera. In point of fact, we had but one serious case of illness in our camp. Dr. Aftimus was taken down with typhoid fever the day of our arrival, and shortly became delirious. For three weeks we nursed him as best we could, while trying to find some means of transporting him to Baghdad. Daily we waited in expectation that the river would rise and that we could send him back safely by boat, and daily he grew worse, until it was evident that the last desperate chance for his life was to transport him by mule panniers to Hillah, and thence by litter to Baghdad. With much difficulty we at last succeeded in securing mules and panniers, and Noorian, taking a two weeks' leave of absence, carried him to Baghdad, where by the kind care of Dr. Bowman, gratuitously given, he was ultimately restored to health.

But while at the outset we suffered from drought and lack of water, the latter part of the season was distinguished by such a deluge as the country had not known within the memory of man. It was six weeks from our arrival before the river rose to a point where we could open communication with Hillah by water and bring down the heaviest portion of our luggage; but before that time the rains had set in. The country all around our camp became one huge puddle, and in spite of dams and trenches, our semi-subterranean storehouses, kitchens, stables, and barns resolved themselves over and over again into cisterns. The horses would be found standing up to their knees in water, and going on a tour of inspection I have found a depth of two and a half feet of water

in the kitchen, and fat Gerghiz, our Chaldæan cook, in the attitude of Buddha, perched on the highest part of the shelf along the side stolidly smoking cigarettes, while he left the victuals and utensils to float about at will. Dirty old Gerghiz, how he hated water! If it had but been rakee he would soon have drunk the kitchen dry. Nevertheless, or perhaps, therefore, he was a marvellous cook, and could, when some important visitor arrived, like M. Berger, the military attaché of the French embassy at Constantinople, conjure up a sumptuous twelve course dinner, with entrées rich and rare, out of chicken's skeletons and the sands of the desert. Our roofs of mats were no protection against the diluvial downpours with which we were favored. We had to live in our rubbers, and more than once it was with the greatest difficulty that we succeeded in saving our unbaked clay tablets with their precious inscriptions from resolution into their primeval mud. Indeed, a few were actually ruined. The huts of our workmen were still more inadequate than our own for purposes of shelter against such a deluge. The rain penetrated everything, and for days together women and children had not a dry rag upon them, nor a fire to warm themselves and cook by. They seemed to go into a sort of torpor while this lasted, like birds or chickens. The instant it was over and the sun reappeared, animation recommenced and every one came out to dry. Of course, during these storms all work in the trenches was impossible. Indeed, the deeper trenches turned into wells and many caved in, destroying sometimes in one night the work of weeks. It was an experience which no other excavator in Chaldæa is likely to have for a half century or more, and was a complete reversal of the almost rainless conditions of our first year.

But these rains had their advantages. They filled our wells and in due course of time, the marshes also, with the much-needed water. They killed the cholera germs.

Huts of Workmen, of most primitive type; of Reeds only, without a covering of mats.

They saved the flocks and crops, and indirectly they were the means of some of our most important discoveries, by forcing us to abandon the trenches in use and commence excavations in new sections; and by washing away the surface in certain places and exposing remains of walls and buildings, thus leading us to dig there. They also cooled the air, and while in the first year the thermometer registered 102° and 105° in the shade in March, it did not reach that temperature the second year before the middle or end of May. The air, too, was clearer than in the preceding year, and several times we saw the snow glistening on the distant mountains of Persia, which had been invisible before.

Once we had a violent storm of thunder and lightning. This seemed to be an extremely unusual thing in that region, and all the people were greatly frightened. Salih Effendi betook himself to his tent and read aloud from the Koran passages intended to charm away the evil spirits of the air. After the storm there was a vivid and beautiful display of cloud-lightning immediately above and beyond the ziggurat of Bel. The people thought that the gods or evil spirits were wroth, and for a while I could fancy myself back in the days when Bint-el-Amir was indeed a ziggurat, and the people regarded any such phenomenon as a manifestation of the wrath of Bel.

After each rainstorm women and girls from the neighboring camps swarmed over the mounds digging up graves with their hands like so many hyenas. You would see them everywhere in little parties, their gowns girded up well above the knee, bent half double, scouring the ground for old seals, beads, and ancient trinkets. When they saw a piece of pottery peeping above the surface they tore up the ground with their hands, pulled the burial jar or coffin to pieces, scattered the bones of the dead, and appropriated such poor relics as they might find in the way either of ornaments or pottery utensils.

Almost all the ornaments of the women, and no inconsiderable part of the pottery used in their domestic economy are derived from this ghoulish industry. One day I saw a woman with several girls digging. The woman called to me and told me that the girls were "fallow," that is, unmarried, and wished to know if we could do nothing to help them to husbands. The lot of an unmarried woman in that region is miserable, and even the lot of the married is not enviable. All the night through we could hear, at all seasons, women turning millstones to grind the meal to make the barley bread, the standard food of the population. Women carry water, bring the wood, grind and pound the meal, and bake the bread. Washing and sewing are industries unknown. No one, man or woman, had a change of raiment. All slept by night in that which they wore by day. Most of them had in addition a few poor rags which with some reeds or a mat they placed on the bare ground to form a bed. No hut had more than one room. Here men, women, and children slept on the ground together, and in many cases more than one family occupied the same hut, and some of them took boarders. There was no possibility of building in these tiny reed huts a fire for warmth. The cooking was done in jars built into the ground in front of the houses.

CAMP SCENES. A CAMP BEAUTY. IN THE BACKGROUND, HUTS OF WORKMEN.

A rainy season such as we had that year brought much sickness in its train. There were colds of all sorts, fever, and the like. We were all more or less ailing most of

the time, and Haynes's health was so affected that he was compelled to leave Nippur some weeks before the close of the excavations and return to Baghdad. In our case, however, it was not only the atmospheric conditions which affected us. These were greatly aggravated by anxiety and worry, from which we all suffered more or less. I, particularly, felt that the failure of this year's work would be a mortal blow. At first, we found nothing whatsoever, and it looked for a time as though the others would be justified in their belief that my choice of Nippur was an unfortunate one. It was while Noorian was away at Baghdad with Aftimus that we made our first important discovery. It was on a Saturday night as the men were about to stop work that in a low line of mounds in front of the ancient temple we discovered what I have sometimes designated as "the jeweller's shop." In a room at this point a large, wooden box had held a great quantity of inscribed lapis lazuli and agate tokens; knob-shaped inscribed objects of magnesite, with one of ivory; a large block of lapis lazuli and two smaller ones with tablet inscriptions; a couple of cylinders; some gold; pieces of turquoise, malachite, lapis lazuli, and magnesite, unworked; and great quantities of glass axes and fragments, made to imitate lapis lazuli, turquoise, or malachite, many of them inscribed, and most of them badly broken. These belonged to kings of the Kossæan dynasty, especially to Kadashman-Turgu and Kurigalzu II.

From this time onward there seemed to be no lack of objects, and before the middle of February it was an established fact that Nippur was one of the richest mounds in inscribed objects which had ever been excavated. In the Temple Hill we found chiefly stone inscriptions, most of them fragmentary, it is true, but some in an admirable state of preservation. Here also were great door-sockets with inscriptions, and fragments

of art-work resembling that discovered at Tello. There were also found in the Temple a fair supply of beautiful tablets of peculiar appearance, unlike anything which any of us had ever seen before. The objects found in the Temple were, for the most part, of early date. Here we conducted systematic excavations; in the first place, for the purpose of laying bare the upper structures sufficiently to enable us to make a plan of the whole; and, in the second place, for the purpose of making a section at one point which would carry us down to bed earth and enable us to follow the strata step by step, and at the same time determine the nature and use of the ziggurat. At the same time we were cutting a similar section on the old Camp Hill and exploring there an interesting building of the period about 1500 B.C. On this hill we found a cache of fine baked tablets, also of the Kossæan period. Indeed, toward the latter part of the time it seemed as though we had but to direct the men to put in their spades and we were sure to find tablets or inscribed stone fragments. Our old experienced diggers said that only Abu Habbah had ever yielded inscribed objects in amounts comparable with those found at Nippur. The greatest number of tablets were found in Hill X., the extreme southern end of the western part of the city, close to our camp. Here they were taken out in such quantities that it was almost impossible to handle them. It was toward the very end of our work and after Haynes's departure that we made our best discoveries both here and at the Temple Hill. When he left we had intended to follow shortly, and I had made no provision, either of food-supplies or of money, to remain at Nippur. But we began to find objects in great quantities and I could not consent to leave the mound while we were finding such treasures. The workmen from Jimjimeh and Hillah offered to trust me for their wages, to be paid whenever I should reach their towns, and even advanced me all the

money in their possession to enable me to remain longer. But I am forestalling my narrative.

Other anxieties there were beside the fear of failure. Some of these I have already referred to, such as the lack of water, sickness, and the like. At the outset our relations with Hajji Tarfa were unsatisfactory. One day he sent Abud-el-Hamud to visit us, evidently for the purpose of making me withdraw my statement that it was his son Mekota who had burned our camp. I received Hamud in our muthif in the presence of a number of chiefs and their retainers, who were visiting me at the same time, among them Hamud-el-Bendir, chief of the Behahtha. Noorian and Abud-el-Hamud entered into a violent altercation, and finally the former turned to me and told me that Abud persisted in asserting Mekota's innocence; that his death was not the consequence of any bad conduct toward us; and that it was our own workmen who had set fire to the camp the previous year. Noorian asked me to speak to him myself as the only means of settling the matter. Mustering my scant supply of Arabic, and affecting a towering rage, I sprang to my feet, scattering the coffee fire in every direction, raised my hand toward heaven, and declared that, by Allah, I knew who had done that thing, and I knew that it was Mekota. Did they suppose that I was like one of them that such things were hidden from my knowledge? Let no man henceforward presume to come to me with such lies, lest he, too, suffer the same fate! Then I stalked out and left them. This was understood as an avowal on my part that I had caused the cholera, and in connection with the exhibition of fireworks, described before, convinced them of my power. Word was brought to me that Hajji Tarfa's chief wife prayed Hajji not to let their son Mohammed come near us this year, for fear that he would do us an injury, and that evil should befall him also, "for these men are giaours, it is true, but still they are

God's creatures, and see what Mekota did to them last year, and the ill that has come upon him." Shortly after Hajji Tarfa came to call upon me himself. I returned the call and sent him a present, and we became ultimately good friends, exchanging visits frequently. Of course, I never recovered the stolen money, but, on the other hand, I never would consent to say that the curse was removed from the land. Among the presents which I gave Hajji Tarfa I included, by special request of his son Mohammed, an American saddle. Later, this appeared in the possession of our friend the Mutessarif of Hillah, who manifestly derived considerable profit from our presence in the Affech land.

Another thing which added to my reputation as a wizard, and won me influence in the country, was my medical practice. Love potions, or any other charms, I absolutely refused to give, although frequently asked for them. Other members of the party I left at liberty to give them if they wished. So Haynes gave Nahab, the es-Sa'id Sheikh, as love charms, slips of paper containing such verses as "Little children love one another," "God is love," etc. These Nahab was to have tied in the garments of the coveted fair one by some woman of her camp. They failed of success, however. For myself, I treated only such simple cases of disease as my lay knowledge of medicine and our small stock of drugs permitted me to handle with a reasonable certainty of giving relief. Nevertheless, the fame of my healing powers spread far and wide, and the Arabs brought their sick from great distances and literally laid them at my feet to be cured. Some of the cases were very pitiful, and I have fairly hid myself in my tent, sick at heart at the sight of so much suffering that I was powerless to relieve. Other of my experiences were highly amusing. I was much pestered by chiefs who wished to be treated out of mere curiosity to see what I did. For these gentlemen

I concocted a drink composed of ten grains of sulphate of quinine, a handful of sulphate of magnesia, or Epsom salts, a spoonful of sulphur, and a glass of gin or whiskey; the whole mixed in a tumblerful of water. I made them swallow every drop, mercilessly rinsing the glass and forcing them to drink again and again, until the last particle was consumed. So comical were their wry faces that Noorian had often to beat a retreat to the rear of his tent to laugh unobserved, but I, fortunately, contrived to maintain my gravity. No man ever came to me a second time for that dose, but all reported that it was marvellous for potency and bitterness, and I had much honor in consequence. My most famous remedies, however, were a solution of sulphate of zinc for the eyes, and a horse-liniment which I had brought for the horses, but which I was finally obliged to use on the Arabs because none of our ordinary lotions could penetrate their skins. The former I applied by dropping it into the eye of the patient as he lay flat on the ground, and every evening a crowd of men, with a few women, would dispose themselves flat on their backs on the ground in front of my tent as an intimation that they wished an application of sulphate of zinc to their eyes. It was certainly a very curious sight, and a second crowd usually gathered to watch the operation. The horse-liniment I was always obliged to apply with my own hands, which the Arabs regarded as constituting the most important part of the charm. After the application my hands looked as though I had rubbed them in mud.

The fame of our excavations also spread far and wide, and much increased our reputation. Hosts of Arabs, sometimes a whole tribe at a time, came to visit them, much as we would a museum. They usually lost themselves in the intricate mazes of the tunnels, wells, and galleries. Often you would hear an Arab calling down from above to a tribesman far below, "My brother, how

did you come down there, how shall I come to you ?" To which the other would reply, " Alas, my brother, I know not! Seek rather how I may return to you." Indeed, our trenches were most imposing in appearance, far larger than any that the natives had ever seen before. So far as the mere amount of earth excavated was concerned, they were much more than equal in size to those of Abu Habba, Birs Nimrud, and Tello put together. The Arabs, of course, believed that we were digging out great treasures, and it was confidently asserted that we had secured the golden boat, or turada, which from time immemorial had been supposed to be contained in these mounds.

Every sheikh of the neighborhood came to visit us; some of them old friends, and some of them before unknown. Sheikh Nahab, of the es-Sa'id, on his first visit, proudly informed me that he had killed two men since he last saw me. This, he supposed, would enhance his importance in my eyes. Later, through Noorian, he begged me to give him a tent within my castle, close to my own tent, for he dared not sleep in the muthif as he feared that he in his turn might be murdered. A petty chief of the Rufe'ya came to visit us and begged for money enough to buy a shirt for a new wife whom he had just taken. He wished to give her a garment, but had no money with which to go to market. It turned out that he, also, had blood on his hands, and it was as much as we could do to carry him safely out of the camp, as some of our Arabs wished to murder him. All of these sheikhs expected, and even demanded, presents, including the sheikhs of the Shammar.

The latter tribe occasioned us for a time much uneasiness. They have their headquarters at Kalah Sherghat on the Tigris, about half-way between Baghdad and Mosul, but migrate every year for a period to the regions below Baghdad. They are unusually warlike, and as

they muster no less than five thousand mounted warriors, these annual migrations are a source of annual consternation to the whole country, and even so large a city as Baghdad is filled with alarm until they have gone north again. They are in friendly relations with the Affech and their allies, which does not prevent mutual depredations, and there is always danger that these may bring about a collision. In February, 1890, large camps of Shammar located themselves close to Nippur. One night a number of camels were stolen from one of these camps by some of their enemies of the old Montefich league. They suspected the Affech or es-Sa'id, and for some time a collision seemed imminent. One day, in particular, was full of excitement. A force of Shammar horsemen was scouring up and down, professedly hunting for the stolen camels, but evidently quite prepared to yield to the temptation of carrying off any unprotected flocks and herds. Affech and es-Sa'id, making common cause, had gathered several hundred footmen on the mounds of Nippur, and were using the top of the ancient temple of Bel as a central signal-station. There I was invited to join them and bring my field-glasses to their assistance. Now the horsemen rode far away into the eastern desert; then the danger-signal was lowered and the flocks went out to pasture. But behind some old canal-bed in the distance, the Shammar made a volt and came stealing back, taking advantage with consummate skill of every inequality of surface to conceal their motions. Then our men waved a black and white striped abbah in the breeze; the signal was repeated from hill to hill, and the shepherds ran their sheep, trained for generations to such a life, into places of refuge, many hundreds of them gathering just beneath us in the open space between the ancient temple and the city walls. Then the Shammar, leaving cover, would descend at full gallop as though decided to make an open raid; whereupon our

warriors would rush down screaming and shouting, brandishing their guns and spears to protect their property. When they had almost met one another, the Shammar would wheel suddenly and gallop along the edge of the mounds, seeking if the Affech had not left some spot unguarded. Then dire consternation would prevail, while it seemed as though our footmen could not reach the threatened spot before them, and our very workmen would leave the trenches and join in the race, screaming, gesticulating, and brandishing picks, shovels, and baskets. Nothing came of it all, but it was a little like sitting on a volcano while it lasted, and it seriously interfered with our work, so that we were glad of the day when the Shammar departed.

There were, of course, numerous petty wars, in some of which our friends and allies were involved. A certain Artya,—a Daghara chief—a meek, suppressed-looking man, whom I had seen and visited in prison at Diwanieh on my way to Nippur, escaped and recaptured his castle, massacring the guard of twenty men who held it, among whom was a connection or dependent of Hajji Tarfa's. So there was war between us and them. One day Hamud took ten men out of the trenches; for there was to be a battle that day and they were needed. They all returned safe and sound the following morning. The war was, however, somewhat annoying, since the Daghara were in a position to diminish our water-supply from the Euphrates, and interfere with our communications with Hillah, both of which they did for a few weeks until the quarrel was satisfactorily settled. Later, Berdi's murderer, with the connivance and assistance of his widow, succeeded in seizing his mud castle and ousting Shahin. All our guards, with Meshgur, their captain, at their head, marched to the help of Shahin forthwith. The poor murderer, being quite unsupported, abandoned the castle

and fled, and the triumphant guards returned to camp enthusiastically dancing and singing, "It was too difficult, Meshgur, but we have done it"; "Our path is edged with diffculties"; "The guard spoils our days," and the like. Other wars there were which did not affect us so nearly, and of course there was a general sense of insecurity, which is, indeed, the atmosphere of the country.

But it was not only wars without which disturbed our serenity; there were also suspicion and distrust within the camp. Our servants the first year had been loyal, faithful, and diligent. They had been trained among the American missionaries in Aintab, and we could rely on them absolutely. Three of them accompanied us the second year. The only difficulty with them was that they spoke no Arabic, and in the case of Mustafa this was increased by the distrust which all Turks seem to feel towards Arabs. He was always fancying that they were plotting some deviltry. But, in spite of these drawbacks, these three men were invaluable, and worth three times as many Baghdad servants. They worked like Americans and we paid them accordingly. The Baghdad servants would only do one thing (a syce, for instance, would care for one horse only), and we paid them native wages, always informing them that, if they wished to work as hard and deal as honestly, we would pay them the same wages as the Aintab men. This they were not willing to do; nevertheless, they were jealous and discontented. Finally they were reported by Mustafa to have conspired to plunder us. The rights and wrongs of the matter I never really ascertained, for this was in Haynes's department, and I left him to manage it, but it became ultimately a serious thing, the Mudir of Affech and the neighboring chiefs being dragged in somehow, until there was nothing for it but to discharge the Baghdad men and turn them out of camp. It was an absurd dis-

turbance, but really interfered with our work more than the neighboring wars.

The Hillah and Jimjimeh workmen maintained their attitude of hostility, and on one occasion their quarrel came to blows. Then the Hillah men threw down their tools before me and struck. Several times quarrels took place between individuals in the trenches, and more than once Noorian or I prevented bloodshed only by throwing ourselves on the assailants, separating them, and confiscating their arms. It was absolutely forbidden to carry arms in the trenches, and when found they were seized. I had ultimately quite a large collection of knives, pistols, clubs, and other weapons, obtained from such seizures. The men complained that if they brought arms I seized them, and that if they did not bring arms they were sure to be robbed as soon as they got outside of the camp.

One day there seemed to be a riot in the camp, and in a few minutes some of the foremen and guards appeared before me, dragging along between them Hazzam, one of our best workmen. A great crowd followed, everybody gesticulating and shouting that Hazzam had been caught in the act of murdering his wife; in proof of which a foreman, Se'id Ahmed, waved in the air a pair of ancient pistols that he had taken from him. In the mean time, everyone who could get at Hazzam was diligently cuffing and kicking the poor fellow. Indignant at such treatment of an unconvicted prisoner, Noorian violently assaulted a particularly officious zaptieh, and in course of time it was possible to hear the case. It turned out that Hazzam wished to live on one side of the camp, and his wife wished to live on the other. In his absence at work in the trenches she had picked up the hut and moved it to the place she preferred. Hazzam, returning at evening, found that his wife had stolen a march and the house at the same time, and peacefully submitted to

the change. Then she took to gossip and gadding, and at last neglected to cook him any food. Finally he got out his old pistols to frighten her into attention to her housewifely duties by threatening to shoot her with the unloaded weapons. She screamed murder, and the crowd set on Hazzam. My judgment was that no man must shoot his wife, and temporarily I impounded the pistols; but I also decided that no one must interfere in a quarrel between husband and wife, and had it intimated to the woman that she deserved a good beating, and no one should prevent Hazzam from giving it to her if she did not reform.

We had also two alarms of fire. Once it was in the workmen's huts. Thanks to the arrangement in straight lines which we had adopted, we checked this fire before more than six or eight families were burned out. Another time, an Arab whom we had employed to cut grass for the horses tried to set fire to the stables. It was discovered in time and put out, but the man escaped to the desert. We always lived in dread of a repetition of the previous year's disaster, on account of the inflammable nature of our surroundings.

CAMP SCENES. OUR FLOCK OF SHEEP AND SHEPHERD.

For our physical comfort we made much better provision the second year than we had done the first. Finding it impossible to secure edible meat, we purchased a flock of sheep, hired a shepherd, and fatted our own sheep, with the result that we had excellent mutton. In

the same way we purchased chickens, keeping a considerable supply in a chicken-coop which we built in the camp. Green food it was more difficult to obtain. The Arabs ate the interior of reeds from the marshes, and the common mallow and sour grass. On one occasion I was called in to doctor one of our guards in convulsions. He had been poisoned by some herb which he had eaten in his search for green stuff. There was poison in the pot. We endeavored to bring green food from Hillah, but with our best endeavors we could secure very little of that sort of thing there, and a garden which Haynes planted in the camp was not a success.

More difficult than the question of vegetables, however, was the question of bringing money to Nippur. This was a dangerous and difficult task. To escape Arab robbers, the money had to be hidden in some way, and sometimes our load of vegetables contained more money than green stuff. More than once I found myself embarrassed by the inability to secure cash, on account of the difficulty of communication with Hillah. Once Haynes went up and secured the money, taking a week off from the camp, and Noorian brought a supply when he came back from Baghdad. At other times we were compelled to trust to a Jew, Shaoul, of Hillah, who proved to be most faithful and serviceable. On one of Shaoul's journeys the Arabs actually stole a woman of the Affech who had joined herself to him in order to secure safe return to her country. Fortunately, the money itself was never taken.

This difficulty about the transport of the money was due partly to the necessity of having large amounts of small change to pay our workmen, so that we were compelled to carry it by the mule load. Our four foremen received six piastres a day. The best workmen received five piastres. These were a few picked men whom we had engaged in Jimjimeh and Hillah to be the heads of

gangs, together with a few more whom we promoted later, on account of their proved efficiency. These men wielded a pick, and it was their business to pick out the earth, and so to pick it out as not to injure any objects which might be hidden in it. It was also their duty to detect the mud brick walls of the ancient buildings, a task which is sometimes very difficult. They were also expected to secure good work from their gangs. Ordinary pickmen received four piastres a day. Each pickman had as his second a halfa, or scrapeman. This man's implement was a triangular hoe. With this he scraped up the earth picked out by his pickman and loaded it into the baskets. He was also supposed to keep a sharp lookout for antiquities, especially small objects in the earth. He received three piastres, or twelve cents, a day. The earth was carried out of the trenches in baskets by men who received two and a half piastres. We should have liked to employ wheelbarrows, but, although I had brought some from America, we could not induce the men to use them without a waste of energy which rendered it unprofitable. I had also brought with me picks and shovels, but these proved too heavy for the weak-bodied Arabs, and we had to provide the flimsy and light tools of the country. The workmen went to their work at sunrise. Noorian and I spent the morning in the trenches, examining and directing. At noon each head of a gang reported to me in front of my tent, bringing all the objects found in his trench, and giving an account of the conditions there. After an hour's rest for dinner, work was resumed, and at sunset a similar report was made by each head of a gang. On Saturday afternoon the work in the trenches was brought to a close earlier, and the men reported for payment. Noorian prepared a list beforehand, and Haynes, on the basis of this list, counted out the proper sum of small change and delivered it mysteriously in my tent. The men came up to me as

they were called, and the money was handed over to them. If they had made valuable finds a backsheesh was given. In case the week had been a particularly successful one, a sum of money was handed to the foremen to provide a "sacrifice," that is, to buy sheep for a general feast for the whole camp. The chiefs whose men worked in the camp were always on hand on these occasions to take from the tribesmen their tribute.

On one occasion when the payments were relatively large and some gold was used, a rough Arab who had found his way past our guards at the gate, arms and all, proposed to those about him to shoot me and make a rush for the money. Hamud-el-Berjud crept up and took his stand by me on one side, and Hajji Kework and Artin with their great navy revolvers suddenly appeared on the other. I realized that something had gone wrong, but did not know until all the money had been distributed how near I had come to being shot. Noorian scolded me, very properly, for having allowed the money to be visible to the Arabs. It was the sight especially of the gold which had aroused their cupidity. The yellow metal is very rare among them, and is prized correspondingly. The mere sight of it seemed to excite their lust. Some of them noticed a gold crown on one of my teeth; after that groups of them would come and squat in front of me and watch until I should open my mouth. Then they would nudge one another and point out the gold tooth to the newcomers. I did not know but that they might be tempted to murder me for the gold in my mouth. Finally, I hinted to them that gold teeth might be a mark of the possession of the gold touch, which enabled me, as they knew, to make gold for them and me; but that neither gold nor the gold touch were transferable.

During one month we had with us as surveyor, Colo-

man D'Emey, a Hungarian engineer in the employ of the Turkish Government. How he happened to arrive when he did was always a mystery to me. But we needed him, for it turned out that the maps made the previous year were in part incorrect and required to be made over again, and so I set him to work. He worked for us as men in Turkish employ are apt to work, and left the plans in such a shape that I was compelled to do the work over again myself in the best manner that my ignorance of such matters allowed. Coloman had been employed in the construction of Baron Hirsch's famous crooked railway in Roumelia, and had many curious stories to tell about that work.

While Coloman was with us a lion created much consternation in the neighborhood. One morning the Arab women, who brought us sheep and buffalo milk, and other products from the neighboring camps, failed to arrive until after sunrise. When they did appear the zaptiehs at the gate told them that I was angry at their tardiness, which had spoiled my breakfast; whereupon one of them, coming and squatting at my feet, related how a lion had sprung out of the reeds as they were on their way and carried off one of their number, so they had turned back, not daring to cross the plain until the sun was up. It was true that there was a lion in the neighborhood, and for several nights he roared about the camp right lustily. By day he secreted himself successfully in the reeds, and although Coloman, who was a Nimrod, hunted him with a host of Arabs armed with tin cans, on which they beat to frighten him out of his lair, he did not succeed in getting a shot at him. Whether he really ate the woman I could never quite ascertain, they were all such desperate liars. That he ate a number of four-footed animals, buffaloes, sheep, and the like, I know.

The year before we had allowed a man to bring a wild

boar which he had shot into our camp. This had created much prejudice against us. The second year I found it wise to observe carefully their prejudices, and much to Coloman's disgust I refused to allow a boar which had been shot to be touched by any one in the camp. I also took pains to exclude from our own *menu* all food which according to their views was unclean, and in general I tried to enter into the life and feelings of the people somewhat more. Obeid, who was the son of a Mullah, used to read the Koran with Noorian, and give me Arabic lessons. He learned to speak freely and fully to me even about religious matters. Others came gradually to treat us in the same way, believing us to be in sympathy with them.

I completely won the confidence of our Commissioner, Salih Effendi, who came to trust me implicitly. The old gentleman ate at our table, and out of respect to his religion, I gave orders that nothing unclean from a Mussulman's point of view should be served. He ate three solid meals a day, did no work, and enjoyed himself between meals making keyff, *i. e.*, taking his leisure, under a tamarisk bush in the level space to the north of the temple. When the heads of gangs made their reports he sat by my side in the selamlik in front of my tent, and in the evening, when I took stock of the objects found during the day, I dictated to him in Turkish, by the help either of Noorian or the Turkish dictionary, the memoranda for his report to the Museum. At proper intervals I dictated for him, also, reports and letters. He grew fat and his life was serene. This serenity and trustfulness Coloman set himself to destroy, by way of joke. I noticed that the Commissioner had lost his appetite, was growing thin, and beginning to wear a troubled look, but did not know the cause. Then Coloman left and Salih's serenity gradually returned. Finally, it transpired that Coloman had persuaded him that I was not keeping my word with

regard to the prohibition of swine's flesh, and that, in fact, much of the food was cooked in hog's fat, a custom with all Christians. He promised to touch Salih's foot under the table whenever a dish polluted by swine's flesh or hog's fat was presented to him. Having won the Commissioner's confidence and entered into this compact, what he did was to tread on Salih's toe whenever a particularly toothsome dish came on, until the poor old man, tantalized day by day by seeing before him, but beyond his reach, as it were, the food which his soul loved, grew thin and peaked with worry, vexation, and starvation. He was a kindly, but too credulous old man. One evening, Coloman drowned some flies in his glass, and then, a trick not unknown to children in this country, restored them to life by burying them in warm ashes, at the same time making passes and uttering exorcisms over them. When Salih saw the dead flies issue from their ashy beds, restored to life once more, he fled to his hut uttering sacred words and phrases to protect himself against the devils with whom the Franks evidently had commerce.

Once or twice the younger Arabs in our camp got up a masquerade to amuse me and extract backsheesh. The masquerade took the form of imitations of wild boars, and was so admirably done that the first time two little boys wrapped up in an abbah came trotting into the inner enclosure I really thought for an instant that they were actual pigs. They frequently amused themselves with musical entertainments, the instruments being shepherd's pipes of two reeds and oil-cans, which latter we furnished. They were very much like children, and would repeat the same thing over and over again, hour after hour, and day after day. One evening Se'id Ahmed, one of our foremen, gave a more elaborate entertainment, for which he engaged a professional dancer. These Arab dancers are boys, not women, but are ordinarily dressed as women.

Their dance is some variety of the *danse du ventre*. It is not at all pretty or graceful, nor what we should properly call a dance, but merely ugly contortions with a tendency toward obscenity. In fact, the objectionable feature of Arab entertainments in general was their grossness.

Now and then the Arabs undertook to have entertainments in the trenches. They were like little children in their methods of work, as in other matters. Now they would run at full speed with the baskets of earth, all of them singing and each trying to do more than any other; and the next moment they would have dropped everything and fallen to dancing and playing. By keeping them constantly in good humor, and under vigilant surveillance, stimulating them by competition, and awakening their interest by explaining what things meant and what they were doing, we got an amount of work out of them which was very unusual and which much exceeded what we had secured in the first year. For this Noorian deserves the credit. Comparing later the actual amount of work done by our men with the amount done by the Arabs employed by the Turks at the new Hindieh canal and dam, I found that with a much smaller number of men we had removed several times more earth in a much less time than they. Among our Arabs were a few who were half of negro blood. These were physically a little stronger than the other workmen, and mentally slightly more childish and irresponsible.

CAMP SCENES. ARAB BASKET CARRIERS DUMPING EARTH ON THE GREAT DUMP IN FRONT OF THE TEMPLE HILL.

Toward the close of our excavations, after Haynes had left, and while we were endeavoring to carry a section of the Temple down to bed level, or if that were not possible to Sargon level, we attempted still other means of securing more work. Noorian stationed himself in the trenches with a light chain in his hands, and when interest flagged and the processions of basket-carriers moved slowly and listlessly, he would stand at the outlet, swing his chain in his hands, and bring it down on the back of him whoever lagged, at the same time cheering them on to greater exertions, sometimes by ridicule, sometimes by jest and merriment. It looked like the old days when Nippur was built. Then processions of slaves from distant lands carried in the earth for its construction, while task-masters with whips in their hands urged on their lagging steps. Only Noorian's whip was not so used as to do any one an injury. It was a pretense rather than a reality, but a very effective pretense.

Our excavations during the first year had been scattered over the entire surface of the mounds. It was necessary for us at the outset to probe many places in order to find the right ones at which to excavate. During the second year our work was naturally more concentrated, but at the same time we employed constantly search gangs to run trial trenches in parts of the mounds which had not yet been explored, and also in the surrounding hills and neighboring ruins. About Nippur there are a large number of small outlying hills. The greater part of these are unnamed. Some three miles to the southeastward, toward Sukh-el-Affech, is a more extensive mound, called Drehem; and to the northeastward, about the same distance away, another called Abu Jowan, or Father of Millstones. The greater portion of the millstones used by the Arabs of that country are taken from old ruin heaps, and I presume, from the name, that this mound had been particularly fruitful in yielding millstones.

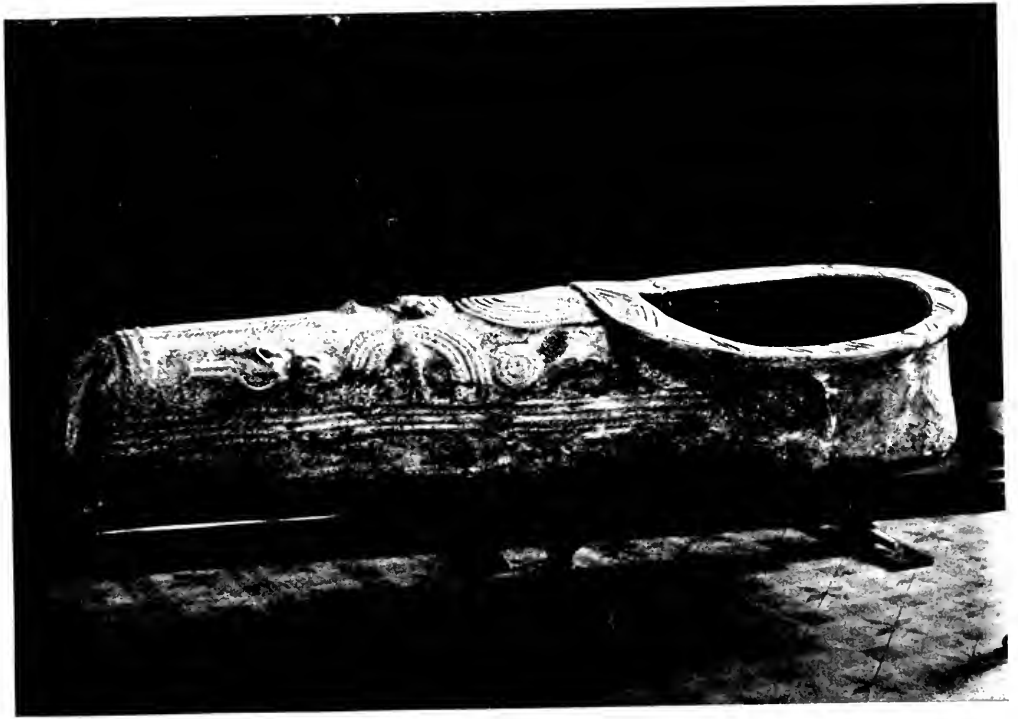
Farther away, about fifteen miles to the northwest of Nippur, but plainly visible, was the prominent ruin mound of Ziblieh. This had been reported as a ziggurat by the Wolfe Expedition, and also by Layard, although Loftus and Sir Henry Rawlinson were both inclined to suppose it to be a ruin of the Parthian period. I was anxious to explore this mound and the country between it and Nippur, where Kiepert's map located the "great ruins of Chirzfun," and also the ruins of Abu Jasim. All maps of this region, and also of the Euphrates valley, contain many names which can no longer be found. Sometimes this is due to actual error, more often it is due to a change of names. Modern names of villages are often only the name of the ruling chief, to whom the village belongs. After his death, provided the village still continues to exist, it is likely to change its name for the name of the new proprietor. In a somewhat similar manner ruin mounds change their names, according to the whim of the natives. They have received their name, it may be, from something which someone had found upon them, like Abu Jowan, and a new discovery or a new incident leads to a change. We found later, for example, that the name Abu Shahrein had vanished, and Nowawis taken its place as the present designation of the ancient ruins of Eridu. So between Nippur and Ziblieh we could no longer find the names Chirzfun or Abu Jasim. We found, in fact, no ancient great ruins. If they ever existed, they must now be buried in the sand hills. But we found instead great fields covered with pottery fragments, and the like, indications of a dense population, and also numerous ruins of canals.

The country between Nippur and Ziblieh was said to be extremely unsafe, and for a month Hamud-el-Berjud contrived various excuses to delay my trip. It was only when Noorian and I prepared to start by ourselves, toward the end of March, unattended, with a small squad

of workmen, that the difficulties and dangers suddenly vanished and a guard was furnished to accompany us. Ziblieh lies on the old Shatt-en-Nil, and at the point where it stands several other canals branch out in different directions. It is not a ziggurat, and I do not see how any one could have taken it for one. The tower rises some thirty to forty feet above the plain, is seventy-five feet long and fifty broad, with corners pointing approximately north and south. Underneath are vaults of masonry. Resting on these is a structure of brick and plaster surrounded by a solid wall of unbaked brick. The wall stands on a mound or terrace of rubble or clay. On the top of the mound we found a rough plaster molding, and part of a small half column of the same material, both belonging to the Parthian period. The baked bricks of which the interior portion is composed were yellowish without and greenish within, coarse, uneven, and brittle, and were set in a great profusion of mortar. The unbaked bricks of the outer construction were of inferior quality, the clay little worked, full of air, and not well compressed, so that they crumbled away and dissolved very readily, unlike the bricks of the best Babylonian periods. The straw with which the clay had been mixed to make the bricks was remarkably preserved, so that on breaking them you found not merely the mould of the straw in the clay, but the straw itself. Between each layer of bricks was a layer of reeds. These also were remarkably well preserved, and often where the bricks had been washed away you could see the reeds projecting so far that they rustled in the wind. This seems to have given the name to the place, which signifies something resembling a basket. Outside of the ruins of this tower there was nothing of any importance, merely a few irregular, low, small mounds, and fragments of brick and pottery scattered over the surface of the flat plain. The Arabs thereabout say that the tower was built by an Arab king, Antar,

as a place from which to signal to bring his adherents together in case of a raid. Such stories are naturally of no historical value. The present practice of the bedouin has, presumably, given rise to this particular story, for Ziblieh, Nippur, and similar ruin mounds are the only elevations in the country, and consequently the natural watch-towers and signal-stations. I fancy that Ziblieh was originally a tower to control a canal centre, and that the present ruin belongs to the Parthian period. The mounds nearer Nippur, Abu Jowan, Drehem, and the rest, yielded nothing but coffins and graves. The latter belonged, as a rule, to the Babylonian period, excepting that at Abu Jowan there was a stratum of modern bedouin graves on top of the older Babylonian. I fancy that these were all places of interment at the time of the prosperity of Nippur.

When in Constantinople, Hamdy Bey had particularly requested me to secure one of the blue-glazed, clay coffins, a specimen of which Loftus had succeeded in carrying from Warka to the British Museum. Hamdy was planning a hall of sarcophagi for his new Museum, the central feature of which was to be the famous Sidon Sarcophagi, and he was anxious to have some specimens from Babylonia. The first year our attempts to secure these coffins had proved a failure. The second year I took the matter in hand myself, determined to secure at least one, at any cost. We selected for our attempt a very fine specimen which was unearthed in the low line of mounds in front of the Temple Hill to the southeast. This was excavated very carefully, the earth beneath it being left in position. The excessive rains compelled us to erect a shelter over it, in order that it might have an opportunity to dry, and to save it from destruction by night by the Arabs in search of treasure we were compelled to build a hut near by, and to place there an Arab guard of several men. As soon as the condition of the surface permitted, we



Blue-glazed, slipper-shaped Sarcophagus, ornamented with naked females, and line and boss pattern. Now in Museum at Constantinople.

cleaned it and covered it with layer after layer of paper, until the outer surface had been made as solid as so much *papier maché*. Then the earth within was removed, Abbas, a thin and wiry Arab, delicately inserting himself into the coffin, and scraping the inside clean with his hands. After that the inside was coated with paper like the outside. Then the ground beneath was removed in sections and the bottom of the coffin plated in the same way, until at last, after slow and painful work, lasting a week or more, we had a solid coffin, which was transported to Constantinople without injury or breakage. So successful was the method, and so interesting did the coffin itself prove to be in the Museum, that later Haynes, following the same plan, prepared a considerable number for removal.

I remember the satisfaction which I felt when our first boat load of antiquities was sent away from Nippur that year, containing this coffin, for which, by the way, a special litter had to be constructed at Hillah, twenty-one boxes of antiquities, chiefly clay tablets, and four sacks of inscribed door-sockets, too large to be boxed. Our antiquities were sent out piecemeal that year, and our goods and chattels likewise, to avoid the es-Sa'id Arabs, and in case of disaster to insure the preservation of something.

I have left to the last my dealings with the es-Sa'id. Unfortunately, the matter of the blood feud was never satisfactorily settled. Sughub, their great chief, escorted Haynes and his party to Nippur, in reward for which I "decorated him"; that is, gave and put on him a handsome Arab dress. He went away apparently satisfied, but the sept of the dead man raised a great outcry, demanding blood-money from me, and accusing Sughub of having received the money and taken it for himself. To rid himself of suspicion he was obliged himself to join in their demand for the payment of blood-money. I refused to pay on principle. The whole matter was an affair

of the Government, not mine, for it was the Turkish guard of the Turkish Commissioner which had done the shooting. I knew that if I weakened, Government officials and Arabs alike would take such advantage of me for purposes of extortion that I could not carry on the work at Nippur. Then the es-Sa'id, as they could not get the money, demanded, or professed to demand, my blood. One day Hamud, my guardian, arrived in a state of great excitement, real or pretended. As I was riding alone in the plains to the north of Nippur the brother of the dead thief had seen me and concealed himself behind the tamarisk scrub. I rode by within easy shooting distance, and he covered me with his gun. Then "he cursed the devil," and now Hamud had come to beg me to give him ten liras ($44), not as blood-money, but out of pity because he was poor, and gratitude because he did not shoot me when he might have done so. That the burden might not fall on us, he proposed that I should take the sum demanded out of the wages of the workmen, which I, as their sheikh, doubtless had a right to do. Hamud received an energetic scolding for complicity with the es-Sa'id, for I divined that the matter was, in fact, made up between them. I told him that I would not give anything, and that shame was on him that he had made so cowardly a proposal; that he was responsible for my safety, and that if a hair of my head were touched he was dishonored, and would not only lose the reward he expected from me, but also come under the ban of the Government. After that he allowed none of us to go abroad without an escort, and I especially could not step beyond my door for any purpose whatever without my movements being signalled by the watch; whereupon a couple of Arabs with long guns appeared and attended me until I was safe within doors once more. Nevertheless, the es-Sa'id did not really wish my blood, but my money, and they never gave up hope of obtaining that. At the last, Sug-

hub came in person, the day before our departure, to make a final demand, and, being refused, he seems to have planned an attack upon our camp for that night. Not altogether trusting our guards, and knowing the ease with which fire might be set to our workmen's huts, and the loss, and confusion, and plundering which must ensue, I resorted once more to stratagem, and gave a second exhibition of fireworks; with the result that the es-Sa'id did not make their proposed attack. They then planned to intercept me as we left the country, and try to extort blackmail by threats of personal violence. Foreseeing this, I had sent our men and goods out in detachments by boats through the marshes, somewhat after the manner of Jacob with Esau, remaining myself until the last.

The first load of antiquities went out in April, as already described. Haynes left at the same time with Mustafa and my horse, which had foundered from the intense heat. He was sure that if his departure were known to any one in the camp it would be revealed to the es-Sa'id, and he would be waylaid and plundered, or something worse; for he was always sure that some one was plotting against his life. At his request, therefore, he was allowed to steal away in the night, without the knowledge of any one but myself; and he and Mustafa, with a zaptieh or two, pressed through to Hillah in hot haste, reaching there the following evening. I had planned to go southward from Nippur to make *sondations* in the mounds in that direction. I disclosed this plan to no one but Noorian, since, had it been known, the Turkish Government would have made objections on the one side; and the es-Sa'id, feeling that I was slipping from their grasp, would have caused trouble on the other. But when everything had been packed upon the boats, including the Turkish Commissioner, and the zaptiehs, Noorian and I, with two of our workmen, Se'id Ahmed

and Abbas, and one servant, Artin, started with Hamud-el-Berjud for Hajji Tarfa's camp.

It was to me a very sad leave-taking. The year had been eminently successful, and our relations on all sides, except in the one matter of the blood feud of the es-Sa'id, were satisfactory, both for the present, and also for the future conduct of the work at Nippur. The people seemed to be fond of us, and gathered in great numbers to bid us farewell, and lament our departure. I must confess that I felt like weeping as I bade them good-by. As a last act we distributed backsheesh to Hamud and the guards, and their enthusiasm at our generosity, which from an American standpoint would not have seemed so very liberal, was great. They declared themselves our subjects, and professed their readiness to guard the mound intact against all intruders until we, or our representatives, should return, and prayed Allah for our safe journey and our speedy reappearance among them.

We floated down to Hamud-el-Berjud's camp in turadas through the reeds, in channels so covered with the white ranunculus that one might have fancied snow had fallen. Here we lunched with our three chiefs, Hamud-el-Berjud, Abud-el-Hamud, and Shahin, and took a siesta. In the cool, toward eventide, we started again, and as darkness was falling landed in front of the magnificent new muthif of Hajji Tarfa, the finest muthif in all that country; and as we journeyed thither we heard on all sides a chorus of men's voices, working at the dams in the rice fields, for the waters were rising mightily, and the dry and parched land of a few weeks before was like to be turned into one mighty lake.

We were very tired and needed change and rest; but we had to sustain us the consciousness of success. Certainly our year's work had been a success, and whereas the first year we had sent to Constantinople only four

boxes, this year we were sending thirty-six, beside the coffin and the half dozen door-sockets, over forty parcels in all, containing about eight to ten thousand inscribed tablets, or fragments of tablets, and several hundred inscribed stones and stone fragments, among which were the oldest inscriptions theretofore discovered in Babylonia, or probably in the world.

CHAPTER IV.

GENERAL RESULTS.

Four Ancient Cities—Description of Nufar—Birthplace of Art and Science—Our Expectations—Methods of Work—Supposed Necropolis—A Jewish Town—A Babylonian Palace—Ziggurats—False Hypotheses—Late Remains—The Temple Found—Orientation—The Ziggurat Explained—History of Ziggurat—Its Construction—The Altar—Sardanapalus—Temple in Ruins—Worship of Bel—Babylonian Religion—Sacred Swine—Relic Shop—Trade with Greece—Inscribed Glass—World Commerce—More Ancient Inscriptions—Sargon of Agane—Fixing Ancient Dates—Thousands of Tablets.

THE traditions of Assyria and Babylonia point to the lower part of the valley of the Tigris and Euphrates as the home of the religion and civilization of those empires, and in the records which have come down to us four cities of that region stand out pre-eminent above the rest in antiquity and importance: Eridu, the most southerly and westerly, the seat of the worship of Ea, god of wisdom; Ur, the seat of the worship of the moon-god, Sin; Erech, the city of Ishtar; and Nippur, the most northerly and easterly, the home of the worship of the great Bel. These four were rivals for the primacy in the earliest period of which we have knowledge, and after they had lost political importance under the empires of Babylon and Nineveh, they still preserved their religious prestige through the antiquity and renown of their temples. The sites of all these ancient cities were determined by the labors of Loftus, Taylor, Sir Henry Rawlinson and Sir Henry Austen Layard in the years 1851–

1854. Taylor conducted excavations in Abu Shahrein and Mughair, finding inscribed bricks, tablets, and cylinders, by means of which they were identified as the ruins of Eridu and Ur respectively. Loftus did the same for Erech or Uruk, which still preserves its ancient name with little change as Warka. Layard undertook excavations at Niffer or Nufar, but war and fever compelled him to desist almost as soon as he began. Nevertheless, inscribed bricks found at that site by him and by Rawlinson identified it as the ruins of the ancient Nippur.

The Wolfe expedition, sent out from this country in 1885, to investigate the ancient sites of Babylonia with a view to future excavations, reported Niffer as one of the most important and most feasible; and a German expedition which explored the country in 1887, reported it to the Berlin Museum as the most promising ruin-mound in the whole country at which to conduct excavations. When, therefore, in 1888, I solicited from the Turkish Government permission to excavate in Babylonia on behalf of the University of Pennsylvania, and found myself compelled, in accordance with the law, to name a definite site, not exceeding ten square kilometres, I chose, as already stated, Niffer or Nufar, obtaining also Birs Nimroud, the ancient Borsippa by Babylon, as an alternative in case Niffer should prove impracticable.

Nufar is situated in the alluvial clay region formed by the deposits of the rivers Tigris and Euphrates and now known by the name of Irak, a little north of the thirty-second parallel of north latitude, at the northeastern edge of the Affech marshes, which are formed by the overflow of the latter river. It is in the Jezireh, or island, between the two rivers, and lies about one hundred miles east of south from Baghdad. The country is absolutely flat, but to the northwest of Nufar there is a region of shifting sand dunes; while from the summit of the mounds themselves a few ruin heaps are visible in various directions,

and on a clear day in winter one may see the snow glistening on the Persian mountains one hundred miles to the northeast. The mounds of Nufar are among the most extensive in all Irak, rivaling in this respect the famous ruins of Babylon. In outward appearance, like most of the ruins of the country, they are merely a group of clay hills, which might be mistaken for a natural formation, were it not for the fragments of brick, pottery, and glass with which the surface is so thickly strewn. The main mass of hills or mounds is about a mile in circumference, but about these again there is a slightly raised surface strewn with pottery fragments extending to a great distance and shading off imperceptibly into the plain, and small outlying mounds occur at the distance of a couple of miles from the main group. The latter represents the ancient city within the walls. This is divided into two almost equal parts by a deep depression, called by the natives Shatt-en-Nil, or canal of the Nil, running through the mounds from northwest to southeast, and representing an ancient ship canal, which left the Euphrates at Babylon, about sixty miles to the northwest, and on which lay some of the most important cities of the country. The highest mound in the group, and the only one with an individual name, Bint-el-Amir, or Prince's Daughter, lies on the northeastern side of the canal. This was a conical, sharp hill, ninety-four feet above the actual plain level, by Sir Henry Rawlinson's measurements, and twenty-four metres, or about seventy-eight feet above the present level of the canal-bed according to the measurements of Mr. Field, our engineer. Several points on the southwestern side of the canal reach an almost equal altitude, and the average height of the mounds may be given as forty-five feet above the level of the canal-bed. It will be seen, therefore, that the excavation of the ancient city of Nippur was no mean task. The work was complicated, moreover, by the fact that this mass of

earth represented the accumulations of an almost incredibly long period, of which we knew next to nothing. Bricks discovered by Loftus proved that the temple of Bel had been built by Ur Gur, king of Ur, some time between 2700 and 3000 B.C., and notices in Arab writers showed, as Sir Henry Rawlinson had pointed out, that it was inhabited and the seat of a Christian bishopric as late as the twelfth century A.D. The Jewish Talmud, on what grounds is not known, assigned to it especial importance, identifying it with the ancient city of Calneh, mentioned in the famous tenth chapter of Genesis. Bricks found at Ur, Larsa, and other cities of the South, mention it, generally before those cities, showing its importance throughout the whole of the third thousand B.C. Late Assyrian records also speak of it with reverence as the original seat of the worship of the great Bel. Here was a period of at least four thousand years to be explored, and this was the sum of the knowledge which we had to guide us.

The question naturally arises, What did you expect to find at Nippur? The discovery of George Smith, a little more than twenty years ago, that the clay tablets excavated by Layard and Rassam in the mounds of Kouyunjik, on the site of the ancient Nineveh, constituted the library of the Assyrian kings, and especially of Ashurbanipal, the Greek Sardanapalus, and that among the tablets were fragments of a great epic, including a story of the flood strikingly similar in many points to that contained in the Hebrew book of Genesis, has certainly not yet been forgotten by the reading public. Further investigation revealed the fact that not only were the flood legends of the Assyrians and Hebrews closely related, but that the similarity extended also to the stories of creation, the fall, the garden of Eden, and a host of religious conceptions, such as the Sabbath, sacred trees, the serpent, the use of high places, the names and titles of

divinities, the word for temple, and many other points too numerous to mention. All these, added to the kinship of the Hebrew and Assyrian languages, already established, proved the closest possible relationship between the two peoples. The language, customs, and ideas of the one were found to supplement and explain those of the other, and it became clear that whatever would throw light on the beginning of the one must also throw light on the beginning of the other. Further than this, a close relation was established between the civilization of Assyria and that of Greece. Greek mythology and Greek art were shown to be deeply indebted to Assyria. Greek weights bore the same names as those of Assyria. The signs of the zodiac, and with them the knowledge of astronomy, were shown to have been borrowed by the Greeks from Assyria. Indeed, the further the investigation was conducted, the more clear became the dependence of Greek civilization upon Assyria. But, on the other hand, Assyrian civilization was shown to have been a derivation from that of Babylonia. The epic of Gilgamesh, or, as it was read until recently, Izdubar, together with other books in Ashurbanipal's library had been, according to the statement contained in the tablets themselves, merely copied from the originals in the temple at Erech. The signs of the zodiac had been established or rearranged by Sargon, the ancient king of Akkade, in Babylonia, and a whole series of astronomical and astrological observations, and mathematical calculations was referred back to him. Of still other series the exact origin could not be ascertained, excepting only that they were derived from Babylonia. It was found that even the temples of the Assyrians were copies of those of Babylonia; the Assyrian cuneiform characters were derived thence; the language itself came from there. Manifestly, if the originals of the flood story and the various other myths and legends so important for the

study of the source of the religious ideas of both Hebrews and Greeks were to be recovered and this civilization traced to its sources, excavations must be undertaken in Babylonia. Accordingly, before his death in 1876, George Smith began to turn his attention in that direction. Hormuzd Rassam followed him, excavating in several places in Northern Babylonia, but especially at Abu Habba, the ancient Sippara, in behalf of the British Museum, while de Sarzec conducted excavations at Tello, in Southern Babylonia, for the Louvre Museum in Paris.

The results of these excavations were astonishing, and in many respects unexpected. The amount of distinctly literary and historical material was comparatively small. On the other hand, de Sarzec's discoveries, and especially his discovery of stone statues of high artistic excellence, threw a flood of light on the early history of art, and the antiquity of civilization in Babylonia; while Rassam, besides discovering the very ancient city of Sippara and various documents of great importance for the comprehension of the religion of the country, also unearthed vast numbers of contract tablets and records which have opened up to us the very details of the every-day life of the people. Considering these discoveries in connection with those already made in Assyria, we believed that if we could excavate the site of one of the great ancient temples, we should learn in the first place how those temples were constructed and what nature of worship was conducted there; in the second place, that we should find records, probably barrel cylinders, which would throw light on the external history of the country and possibly take us back to an earlier date than any hitherto reached; in the third place, we hoped to find fragments of mythological and religious documents, or even a temple library, which would complete, or at least enlarge, our hitherto scanty knowledge derived from the library of Ashurbanipal; further than this we hoped to find objects of archæo-

logical and artistic value, and records and contracts of a miscellaneous description, which would add materially to our knowledge of the life, language, and thought-history of early periods. In choosing the temple of Bel at Nippur, therefore, which was indicated by various inscriptions and references as the most important and probably the most ancient of the great temples of Babylonia, we hoped to discover some or all of these things.

It was June of 1888 when we left this country; it was December of the same year before we had secured from the Turkish Government permission to dig. We reached Baghdad January 8, 1889. Here we were delayed over two weeks, first by a toothache of the governor-general, and then by official business, so that we did not reach Niffer until the last day of the month. Another week was spent in preparing and presenting a topographical plan of the mounds, a preliminary condition imposed upon us by the Turkish Government. As we were compelled to stop work April 15th, our actual period of excavation during the first year was but little more than two months. The second year, in spite of many obstacles, we succeeded in commencing work by the middle of January, and continued our excavations until the middle of May, a period of four months. In all, therefore, I had six months in which to explore this enormous mass of earth. So far as possible I sought to make up this deficiency in time by working under high pressure. The first year we employed on an average between one hundred and two hundred workmen, and the second year between three hundred and four hundred. But, as Mr. Brassey once said, you always get an amount of work proportionate to the wages of the country; two-dollar men do two-dollar work, and ten-cent men ten-cent work; and ours were ten-cent men. Their methods and equipment were of the most primitive. At the head of every gang was a native of Jimjimeh, a village on the site of ancient

Babylon, or some similar town, who had spent his life burrowing for antiquities, chiefly as a privateer, in the payment of Chaldæan and Jewish antiquity dealers of Baghdad. This man was equipped with a light, one-armed pick, and it was astonishing to see with what skill he would distinguish some crumbling wall of adobe buried in clay, or with what rapidity he could remove the earth without ever breaking the frail objects that lay hidden there. Behind him came a man with a scraper, a triangular, short-handled hoe, whose business it was to break up and scrutinize the earth set free by the pickman, and load the baskets of the carriers, wild Arabs of the neighborhood. Of the latter there were five or ten in each gang, according to the distance to be traversed. We had brought wheelbarrows with us for carting off the earth, but it required so much supervision and such boundless patience to teach wild Arabs to use them that we gave it up, and permitted them to carry the earth in small baskets supported on their hips, after the manner of the country. In many regards, however, we found ourselves their pupils, and certainly, unless they had taught me, I should not soon have learned what deep, narrow trenches, and interminable tunnels may be run through the seemingly loose clay of Babylonian mounds without shoring or any support. We sank small well shafts or deep narrow trenches, in many cases to the depth of fifty feet or more, and pierced innumerable small tunnels, one of them one hundred and twenty feet in length, after the native method, never meeting with a serious accident, and rarely experiencing a cave-in. In praise of our ten-cent workmen it should be said, moreover, that the amount of earth removed by them in the six months of excavations was really very large, so that in cubic feet of earth excavated, and size and depth of trenches, ours far surpassed any excavations ever undertaken in Babylonia; and de Sarzec's work at Tello, which represented six seasons or there-

abouts, was probably not even the tenth part as large as our work of as many months. The credit for this comparative efficiency is largely due to our interpreter, Mr. D. Z. Noorian, who was also director of the workmen.

But after all we excavated really but a very small portion of the huge mounds of Nufar. And huge they certainly did seem to us when we found ourselves face to face with the problem of excavation. We felt that we held a ticket in an immense lottery. As will often happen, our first trench was determined by accident rather than design. While waiting for the preparation and acceptance of our map we employed the laborers whom we had brought with us in the erection of a camp. Searching for bricks to build drains and the like, they discovered one day a brick wall close to the camp site (I.), on the southern side of the great canal, some of the bricks from which they brought to the camp. Not a few of these proved to bear an inscription of Ur-Gur, who ruled in Ur of the Chaldæans before 2700 B.C., some five hundred years or more before Abraham was born. This discovery led us to open our first trench at this point. But the wall proved to be only part of a late tomb of the Parthian or Sassanian period, built of bricks gathered indiscriminately from the older ruins. In this tomb we found a broken, slipper-shaped coffin, made of thick baked clay covered with a blue glass enamel and ornamented with figures representing a woman from the waist upward; but below the waist developing into ornamental curves. Beside the body in the coffin others had been buried uncoffined, and there were several vases which had once contained food for the dead, together with ornaments and utensils of various sorts. Further excavations in this region revealed large quantities of tombs and coffins of the same period piled on top of or across one another in indescribable confusion. In one tomb no less than ten bodies were buried, and in several cases two

bodies had been thrust into the same coffin. At first we supposed that we had lighted upon the necropolis of Nippur, but further examination proved this to be incorrect. The dead had been buried here at a period when this portion of the city was in ruins, very much as is done in many Oriental cities at the present day. So in Brousa, in the very heart of the city, I have seen the space within the walls of a ruined house utilized for burial purposes. Of course, in due time such a lot will be built over, and houses erected above the graves. In the same city of Brousa I have seen graves by the side of a street, built against the houses; and in Baghdad I have known people to bury their dead in their cellars or courtyards, a custom alluded to in the *Arabian Nights*. The same conditions prevailed in Nippur, and, while cemeteries existed without the walls, and there was a necropolis at no great distance, nevertheless, numbers of people were buried beneath their own houses, and still more in vacant lots and ruin heaps.

But to cut a long story short, while this trench was at the outset extremely unsatisfactory and our discoveries here during the first year of small importance, so that we were quite misled in our conclusions as to the character of this portion of the mounds, we ultimately obtained results of much interest and importance. The upper surface of the mounds at this point, where not cut into gullies by the rains of centuries, proved to be covered with the ruins of a Jewish settlement. The houses, according to immemorial custom, were built of sun-dried bricks, and the roofs were loaded down with a couple of feet of earth. When they fell into ruins, therefore, the roofs and upper portion of the walls resolved themselves into a mass of earth which effectually protected and preserved the lower portion of the houses, as well as all but the most fragile of their contents. We found in these houses besides a few household utensils, quantities of

bowls inscribed in ink with Jewish incantations in the names of demons, angels, and archangels, accompanied often by mystical and illegible characters, and curious, uncouth, and even obscene figures. They were used for medicinal and magical purposes, as similar bowls are used in Egypt at the present day. Water or some other fluid was put in the bowl, and the patient drinking this, took also the incantation into his stomach; or, as the native expression goes, into his heart. (Whenever a native needed a purgative, he always told me that his heart was sick, and when the opposite, his belly.) We also found part of the outfit of an apothecary or doctor, containing, along with an elaborate show-case, if I may so call it, a couple of jars of what appeared to be some medical mixture. All these objects in the Jewish settlement were determined by Kufic coins found with them to belong to the seventh or eighth century A.D. Below these, under a vast mass of miscellaneous and disorganized débris and hosts of graves, we found a Babylonian palace of great extent and some architectural pretensions, having colonnades of tapering brick columns, with alcoves and upper chambers supported by square and elliptical columns. This building had been destroyed by fire, and in two of the rooms we found stores of burnt grain. But our most interesting discovery was made in the middle of a small burned room which seemed to be in some way connected with the larger structure, although outside of it. Here was a large deposit of inscribed tablets of baked clay, varying in size from a foot to an inch in length, and containing records of the temple income and the like. These dated from the fourteenth and thirteenth centuries B.C., a period when Babylonia was ruled by a foreign dynasty, the Cossæan, which had its origin in the mountains of the Persian and Median frontier, and the seat of its dominion in Babylon. As we had almost no knowledge of this dynasty these tablets, although not directly and pro-

fessedly historical, possess a high value, giving us the names and dates of hitherto unknown kings, and throwing light on their government, the conditions and civilization of their times, and also on the administration of the temples and the religious condition of the country at that period. The great Babylonian temples, as we learned from this and similar archives, were often enormously wealthy. They owned and cultivated great tracts of land; they possessed legions of slaves, and hosts of sheep and cattle; and were engaged in industries and commerce. From the positions in which we found documents concerning the temple income in Nippur, I am inclined to think that a very considerable portion of the city was the property of the temple.

But while the situation of our first trench and the consequent discoveries of the Jewish town, the Babylonian palace, and the Cossæan tablets was determined by accident, this was not the case with the temple itself. The height and the peculiar, almost conical, shape of the hill (III.) called Bint-el-Amir ("Prince's Daughter"), on the north side of the canal, led us to conclude at the very outset that this was the site of the ziggurat, or high place of the old temple of Bel. It stood toward the northern edge of an irregular plateau of débris, deeply seamed with furrows, fairly well-defined on three sides, but on the fourth or southwestern side somewhat confused with the next series of mounds, so that it was hard to say whether or not they belonged together. This great mass of earth, in its smallest dimensions covering a surface of more than eight acres, with a general height of forty-five feet, or thereabouts, we supposed to be a solid structure or platform of mud brick on which the ziggurat stood, and which itself constituted the lowest stage of that structure. The neighboring and half-connected mound we supposed to represent the chambers for the priests, and the like. A ziggurat, we knew from the work of

sundry excavators, as well as from the descriptions of Herodotus, to be a sort of rectangular pyramid, consisting of a diminishing series of terraces set one upon the other, each toward the edge and not in the centre of the one below. But what was the purpose of these singular structures, and whether, and in what way, they were connected with temples had never been definitely ascertained. At Khorsabad in Assyria a ziggurat had been found as an appendage to a royal palace. At Mughair or Ur no buildings were reported in connection with the ziggurat dedicated to the moon-god. At the ancient Borsippa, near Babylon, the ziggurat had constituted a portion of Nebuchadrezzar's great temple to his name god, Nebo, and had been surrounded on two sides at least by buildings of unbaked brick. Herodotus said that in Babylon the ziggurat formed part of the temple of Bel-Merodach, and was at least partially surrounded by other buildings. On these data we based our working hypothesis. Now the excavators of Borsippa, Ur, and Kalah Sherghat, ancient Ashur, had found in the corners of the ziggurats in those places large inscribed clay cylinders of barrel shape containing the records of the last founders, and it had come to be a tradition that similar records, answering in a way to the documents deposited by us in the corner-stones of churches and public edifices, would be found in the corners of all ziggurats excavated. Accordingly our first trenches were directed toward the discovery of the corners of the ziggurat, both above and below, for it was uncertain in which corners and in how many we might hope to find cylinders. Theoretically, it seemed to be an easy matter to find the outer corners from the shape and appearance of the mounds, but in practice it proved a matter of the greatest difficulty, partly because we had mistaken a building with immense surrounding walls and irregular towers at the corners for a solid, rectangular terrace, and partly because the corners of struct-

ures of unbaked brick are precisely the points which are liable to be completely ruined. Our outer corners proved, therefore, a thorough *ignis fatuus*, and we spent an immense amount of labor upon them with very little profit. The corners of the inner structure, which did turn out to be the ziggurat, were not so difficult to find, and were better preserved, owing in part to the freer use of brick. In fact, here we were embarrassed by the excess rather than the lack of corners, for, owing to a curious system of buttresses, and the superimposition of building upon building, we found in all between twenty and thirty corners. All the more prominent of these I explored, but to my great disappointment none of them proved to contain the much wished-for documents. They had, in fact, been explored by someone else in ancient times.

It was not until we commenced some of the inner sections of a long trench planned to stretch across the temple diagonally from its apparent northern to its apparent southern corner that we began to ascertain that the plateau did not represent the ruins of a great platform of unbaked brick, the base of a ziggurat. But although we advanced thus far in knowledge, our earlier discoveries in this and other trenches were like to have led us into a grave error of another sort. Wherever we excavated we turned up recent remains, graves of Arabs, made of unbaked bricks set on edge, merely sufficient to prevent the earth from falling directly on the body; old water jars, broken off at the top and used as coffins; brick tombs, built of bricks stolen from ancient ruins; and slipper-shaped clay sarcophagi of the Parthian or Sassanian periods. In one place we found fragments of inscribed bowls from the Jewish town. At another point, close to the surface, I found a large clay chicken-coop, such as is used at the present day in many parts of the Turkish Empire, in size and shape not unlike a bushel-basket, inverted and perforated. These are placed over setting

hens and young broods by night to protect them from jackals. In another place I found a drinking horn of brown glazed pottery of Babylonian workmanship and Greek design, a memento of the Seleucid rule that followed the period of Alexander. Elsewhere I unearthed Greek terra cottas. Everywhere we found late walls of miserable mud houses, some of them built against the ziggurat itself, while such inscribed bricks as we found were not in their original constructions, but in late rubble walls of tombs and the like. We found nothing that was surely ancient, and much that was late and even modern. On this account one of our assyriologists reached the conclusion that the ruins we had found were those of a fortress of the Sassanian period, built on the site of the ancient temple; and at the close of the first year I suppose that the majority of the members of the Expedition inclined to this opinion. The workmen, on their part, accustomed to dig for nothing but inscribed tablets, regarded the temple hill as a complete failure, and every head of a gang was eager to be transferred to some other place, and especially to a small hill to the southeast of the temple (V.), in a nose of which we had found a considerable number of contract and similar commercial tablets commencing about 2000 B.C., and extending into the Persian period, about 500 B.C.

Certainly the results of our first year's excavations in the Temple Hill were not encouraging; nevertheless I was convinced that we had found the ancient temple of Bel, and that important discoveries must attend its thorough exploration. Accordingly, at the beginning of the second year, I placed the greater part of my men at this point, against their protests that it was a sheer waste of time and money. But the history of these excavations is long and complicated, and we shall do better to turn over to the end and see how it came out, and what the temple proved to be. It comprised an area intended to

be six hundred and fifty feet square by outer measurement. By an error of a sort of which there are not a few in various parts of the building, proving the lack of instruments of precision, the eastern angle was made obtuse instead of right, thus lengthening unduly the northeastern and northwestern walls, and forming an irregular four-sided figure. This area was enclosed by a huge wall of unbaked brick with irregular tower-like masses at the corners. On the southeastern side, or front, this wall still stands to the height of more than sixty feet, about fifty feet thick at the bottom and thirty at the top. On this, around the whole extent of the temple, were rooms and corridors. The surface within this enclosure was filled up to more than half the height of the wall with a mass of rubble and débris, which formed the foundation for a great number of various structures, constituting a small city in itself. Within the wall on the southeastern side was a large, deep corridor or passageway, and beyond this a second wall, relieved by two solid round towers. Within this, at a slightly higher level than the corridor, were a number of rooms and chambers, kitchens, storerooms, rooms used in connection with ablutions and purifications, and many more, the use of which we do not certainly know. Still moving inward in a direct line we ascend a narrow platform, beyond which rises steeply in two terraces the solid mass of the ziggurat proper, a rectangular oblong, with irregular, buttress-like projections on all four sides, surmounted, apparently, by a small brick building. This formed the apex or summit of the whole mass. It was surrounded on three sides by chambers, forming terraces beneath it, and on the fourth side it backed closely on the retaining wall. Such was substantially the form of the temple of Bel, or the building which occupied the site of that temple, as I found it,—singularly lacking, it must be confessed, in architectural grace, and rude in

material, but possessing a massive grandeur due to its vast bulk, and the mountain-like appearance which it presented in the midst of that level country.

The corners of this building pointed toward the cardinal points. The same peculiarity had been noticed by the earlier explorers at Ur, Borsippa, and elsewhere, and much has been written about the astronomical and religious purposes of such an arrangement, and the mathematical precision of the measurement. I found this orientation to be merely approximate. The corner of the ziggurat at Nippur was twelve degrees east from the magnetic north, and I observed about the same deviation at Ur and Erech. In the case of another ruin I found the divergence to be as great as twenty degrees. This orientation of temples and other buildings depended, I think, at least at the outset, on natural conditions, and not on astronomical and religious theories. The buildings of the natives of the present day are apt to be arranged in the same manner in order to catch the wind; for the rivers and the valley trend from the northwest to the southeast, and the prevailing winds follow the same course. Every one, therefore, turns his house with a side to the northwest for coolness' sake, rather than for astronomical theories, and this brings the corners of all buildings approximately toward the cardinal points.

The most striking feature of this building was the ziggurat. Ziggurats, as already stated, had hitherto been somewhat of a mystery. When the French first discovered one at Khorsabad, in connection with the palace of Sargon, king of Assyria, they supposed it to be an observatory, from the summit of which the official astrologers and magi made their observations of the heavens. With this idea, however, Herodotus' description of Nebuchadrezzar's wonderful ziggurat to Bel-Merodach at Babylon does not agree. He says: " In the middle of the precinct there was a tower of solid masonry, a fur-

long in length and breadth, upon which was raised a second tower, and on that a third, and so on up to eight. The ascent to the top is on the outside, by a path which winds around all the towers. When one is about half-way up, one finds a resting-place and seats, where persons are wont to sit some time on their way to the summit. On the topmost tower there is a spacious temple, and inside the temple stands a couch of unusual size, richly adorned, with a golden table by its side. There is no statue of any kind set up in the place, nor is the chamber occupied of nights by any one but a single native woman, who, as the Chaldæans, the priests of this god affirm, is chosen for himself by the deity out of all the women of the land."

Now the word ziggurat means nothing more than a peak or high place, a term familiar to every reader of the Old Testament in connection with the Hebrew practices of worship before the Babylonian exile. To the early Hebrew mind a mountain top, or an artificial high place, afforded a means of closer access to God. Precisely the same idea attached in Babylonia to a high place, or ziggurat. Moreover, when we examine the linguistic testimony of the two countries, we find this further fact: in the Babylonian cuneiform script the same sign was used to mean both land or country and mountain; and in Hebrew one word (shadu) has likewise the same double significance. But identical words for country and mountain could only have originated among the denizens of a mountainous region. Therefore the ancestors of both Hebrews and Babylonians, although inhabiting the plain country of Babylonia and developing their civilization on that soil, were not autochthonous there. Their forefathers, the authors of their language, had been natives of the mountains. Thence their children, descending to the plain, had brought many primitive ideas, and among others the idea of God as a god of the

mountain-tops, especially manifesting himself in celestial and aërial phenomena;—the sun, the moon, the stars, the storm with its thunder-voice and lightning-bolt and deluge of rain poured from the rending clouds—and therefore God was especially to be worshipped on high places. Ziggurats were conventional representations of mountains; a survival of ancient, primitive, religious ideas. The ziggurat of the temple of Bel at Nippur, or rather the temple itself, with the ziggurat as apex, was an artificial mountain, and the inscriptions found there inform us that the name of this temple was, in fact, E-kur, or Mountain House, while the ziggurat was called Imgar-sag, Mountain of Heaven, or Sagash, High Towering. The small brick structure that crowned the ziggurat was the mysterious dwelling-place of the unseen god, emblem of the tabernacle above the clouds, and in so far similar to the Holy of Holies of the Jewish temple at Jerusalem. At the base of the ziggurat stood the altar at which were offered the sacrifices to the god that dwelt upon the summit. Such was the origin and meaning of the ziggurat, or high place. The only other region, so far as known, in which similar structures have been discovered, is Southern Arabia.

The ziggurat of our temple was in height and extent inferior to that of Babylon as described by Herodotus. His had eight stages, ours two; his was a furlong square, ours, measuring over the buttresses, two hundred and sixty-four feet by one hundred and eighty-five. But the arrangement of our temple was such that the whole enclosure, about a furlong square, might be regarded as the lowest terrace, and each change of elevation as a stage, thus making three or four stages instead of two, and conforming more closely to Herodotus' description. But the only mass of solid masonry was the two-staged structure near the northwestern edge, which constituted the ziggurat proper. Starting at the southern corner of this,

Great Trench on Temple Hill, looking southeast from the Ziggurat ; showing walls of houses of last Reconstruction, the removal of which, in the centre, has just begun.

I cut a trench through the centre. It proved to be a solid mass of unbaked brick, sixty-seven feet and a half thick from top to bottom. First there were some six feet of immense blocks of adobe, then a mass of smaller sun-dried bricks arranged in a system so singular that there could be no doubt of its homogeneity. A strange find made here was a goose egg contained in a cavity between blocks of unbaked brick. Some humorous or mischievous workman had walled it in two thousand years or so ago, and there we found it still intact. Beneath the ziggurat we found a mass of ashes, and below these again the remains of other walls of earlier date, the bricks in which contained fragments of still earlier pottery. We descended thirteen feet below the bottom of the ziggurat and found everywhere in pottery, bricks, and the like, evidences of a civilization substantially unchanged, but no remains of an earlier ziggurat, and no inscriptions.

My excavations came to an end in May of 1890. In 1892 another expedition was sent out from the University of Pennsylvania under Mr. J. H. Haynes, who excavated there almost continuously from 1893 to 1895. His results throw light on mine, and by the help of that light I am now able to give the history of the ziggurat and the structures preceding it as follows: The earliest buildings on this site were erected probably before 5000 B.C., or even 6000 B.C., but exactly when they were built, or what was their nature we do not know. The earliest dated material is some bricks with the stamp of Sargon of Akkade, 3800 B.C., and of his son, Naram-Sin, 3750 B.C.; but below these were still more ancient constructions. In Sargon's time, and even somewhat earlier, as we know from inscriptions, these buildings already constituted a temple to Bel, called E-kur; but the form of the temple was different from the form of the later temple which we explored, and, so far as we know, it possessed no ziggu-

rat. Whether the earlier constructions at this point, antedating Sargon by a couple of thousand years or so, apparently, were part of a temple with the same name, we cannot yet affirm positively, but may fairly conjecture that they were.

Immediately upon the ruins of Naram-Sin's constructions, Ur-Gur, king of Ur,—the greatest builder of the ages preceding Nebuchadrezzar, whose constructions are met with everywhere from Ur to Nippur,—having levelled the surface for the purpose, erected a massive platform of unbaked brick eight feet in thickness, and built upon it the earliest ziggurat of which we so far have any knowledge, either at Nippur or anywhere else. This formed the core of all the later ziggurats. In form it was a rectangular oblong, about one hundred and seventy five feet by one hundred, composed of three stages, rising one upon the other. This ziggurat was built of unbaked bricks, with the exception of a few of the lower courses, chiefly on the southeastern side, where it was faced with baked bricks, bearing the inscription of Ur-Gur, which gives us a date somewhere between 2700 and 3000 B.C. The unbaked bricks of this structure were guarded from the destructive effect of the elements by a mud plaster, which it was the custom to apply over all those parts of the surface of important buildings which were exposed to the air. This plaster was renewed from time to time, and in excavating the ziggurat the traces of many such renewals were found. In addition, large conduits of brick were built at the centre of three of the four sides to conduct the water from the surface of the upper terraces, and thus prevent, as much as possible, dripping from above upon the parts below, and the consequent washing away and breakage of angles. About the base of the ziggurat on all four sides was a sloping pavement of bitumen which protected the foundations of the ziggurat. The platform of unbaked bricks upon which this structure

stood stretched out very much beyond the ziggurat, forming upon the southeastern side particularly an extensive open court, the dimensions of which the excavations have not yet enabled us to determine. In this court, and close to the southeastern wall of the ziggurat, a little north of the central point, stood, presumably, a large earthern altar, covered above with bitumen, and having a rim of the same material.[1] This altar occupied in relation to the ziggurat substantially the same position which the altar in the temple of Yahweh at Jerusalem occupied in relation to the Holy Place of that temple. Access was had to the terraces of the ziggurat by means of a causeway, a little to the south of the altar. This causeway was relatively quite narrow, and the ascent was very gradual, but whether there were steps or merely an inclined plane cannot be determined.

In spite of the greatest care taken for the preservation of the surface of the ziggurat through frequent replasterings, the earth would wash down from the unbaked bricks of which that surface was composed. This, added to the refuse which accumulated in consequence of the crowds that frequented the court, and the dust and sand blown in by the strong winds of the country, gradually covered Ur-Gur's pavement out of sight. Accordingly, some two or three hundred years after his death, King Ur-Ninib, of the dynasty of Isin, laid in the old court a new pavement composed of large baked bricks, some of which bore an inscription with his name. He, and other kings, conspicuously Kurigalzu II. of Babylon, 1306–1284 B.C., also repaired the ziggurat from time to time, but without in any way altering its form. Finally, about 1250 B.C., the accumulations of débris having at that time reached a considerable depth, so that, apparently, Ur-Ninib's pavement had been buried out of sight, and the level of the

[1] Such an altar was found by Haynes in this position but at a lower level. I conjecture that at a later date the altar stood at about the same place.

floor of the court thus raised some two or three feet, at least, Kadashman-Turgu, a king of the Cossæan dynasty ruling in Babylon, built about the base of the ziggurat a projecting casement of bricks, readily identified by his inscription upon the bricks.

After this we have no change in the form or dimensions of the ziggurat to chronicle for a space of six hundred years. King followed king, and dynasty, dynasty. The rain-storms wore away the mud plastering from the terraces of the ziggurat, and from time to time the plastering was renewed. Inch by inch the mud that was washed down filled up the courtyard, and so the ziggurat became gradually lower and lower. Here and there a stray brick with a stamp upon it gives us the name of some king who either made repairs upon the ziggurat itself, or else built or repaired some of the other structures or rooms of the great temple. But none of these kings seems to have added any feature of real importance to the temple, or to have done more for the ziggurat than merely to keep it in repair. At last the Assyrians became masters of the country, and, having conquered it by force of arms, found themselves in turn conquered by the art, science, literature, and general culture of the ancient people, in comparison with whom they were but infants and barbarians. Babylonia played toward Assyria in the last century of the existence of the latter the same part which Greece played toward Rome in the days of Plautus and Terence, Horace and Ovid. The last of the great Assyrian kings, Ashurbanipal, or Sardanapalus, borrowed his library from the temple of Ishtar at Erech, as we have already seen. In his reverence for the ancient shrines of the Babylonian fatherland, he also undertook on a grand scale a restoration of this most ancient and revered of all temples, the temple of Bel at Nippur. About the original ziggurat, enclosing it on all sides, he erected a new and larger structure. The lower terrace of

this new ziggurat he faced with baked bricks, each of which bears the following inscription: "To Bel, lord of lands, his lord, Ashur-ban-aplu, his favorite pastor, the powerful king, king of the four quarters of the earth, built E-kur, his beloved house, with bricks." This terrace exhibits the first attempt at architectural adornment in the long history of the ziggurat. Instead of a perfectly flat, plain wall, Ashurbanipal built a wall relieved by square half columns, like the wall of the ziggurat of the temple of the Moon at Ur.

After Ashurbanipal's time we find evidence of still one more important restoration of the ziggurat, which changed its form completely. Huge, buttress-like wings were added on each of the four sides, giving the structure a cruciform shape unlike that of any other ziggurat yet discovered. Who was the author of this innovation we do not know, as he did not use bricks manufactured for the purpose with his own stamp upon them. It was certainly, therefore, not the famous Nebuchadrezzar; for that monarch, greatest of all the ancient builders of Babylonia, always left his name and inscription upon his work. I am inclined to think that it was a monarch not far removed from him in time, living, let us say, for the sake of a definite date, about 500 B.C. It was presumably at the same time, about 500 B.C., that the buildings of unbaked bricks, already described as surrounding the ziggurat, were erected about and quite close to the ziggurat on all sides. I am inclined to think that this restoration represents a new religion, and that if the new buildings were a temple, they were not consecrated to the worship of Bel. These buildings stand on a foundation of well-packed rubble, containing many bricks and fragments of bricks with the stamp of Ashurbanipal, giving evidence of the previous destruction of some building or buildings of Ashurbanipal erected on the site of the great open-court of the old temple of Ur-Gur and Ur-Ninib.

From this time onward until the temple fell into ruins and was abandoned we have no certain dates. The extent of the accumulations and the evidence of successive stages of occupancy show clearly, however, that the period was a long one, and Greek pottery and terra-cotta heads of Greek manufacture found in the later strata of the houses prove that it extended into the time of the Seleucids. In Constantinople, the accumulation of débris on the site of the ancient hippodrome between the time of Constantine and the Crimean war, a period of fifteen hundred years, was about fourteen feet. Far more rapid is the accumulation in narrow streets between mud houses, as any one who has visited such towns as Baghdad and Hillah must have observed. At Tell-el-Hesy, in Philistia, under somewhat similar conditions, Petrie estimated the average rate of accumulation at five feet a century. The accumulation of dirt, dust, and débris during the period of occupancy of the houses on the eighteen-foot level in front of the ziggurat was on the average about twelve feet, which at the same rate would give us a period of about two hundred and fifty years. I am inclined to think, however, on other grounds, that it was really nearer three hundred and fifty years. The houses themselves were occupied at two, or, in some places, three levels, new doors being cut above the old ones as the streets or passage-ways gradually filled up. But not only did débris accumulate without and within the houses, the amount of material washed down from the ziggurat was also very considerable, and from time to time, as the apparent height of the ziggurat was diminished by the accumulations about its base, it became necessary to add to it above, just as in the houses it had become necessary to cut new doors above the old ones. Two or three such additions to the upper stages of the ziggurat can still be traced. At last men ceased either to make additions or repairs; the sanctity of the temple of Bel became a thing of the past;

Figurines. In the centre, a Greek terra-cotta head of good workmanship, showing traces of color ; found in rooms of last Reconstruction on Temple Hill. Date, circa 300 B.C. To right and left, rude clay figures, presumably representing the god Bel. Found in burnt houses on Hill X. Date, circa 2500 B.C. In front, below, a dog, of hard, white-enamelled, procelain-like substance. Found in Hill V, 14 metres below surface. Date, circa 2500 B.C. To right of this, an obscene clay figure, from Cossæan grave in Hill V. To left, a blue-enamelled figurine of Egyptian workmanship, from Babylonian grave in Hill I.

and both the ziggurat and the buildings about it were allowed to fall into ruins, and men began to bury their dead on the artificial hill where their ancestors had worshipped God. On the ruins of the buildings about the ziggurat we found graves and coffins of the Parthian or Sassanian periods, for, unfortunately, our ignorance of Parthian and Sassanian antiquities does not enable us always to distinguish the one from the other. Somewhere about or before 150 B.C., apparently, the ancient temple of Bel at Nippur, which had been the great seat of worship for about five thousand years, fell into ruins.

And now, a word about the worship of the temple. The great god that inhabited it was Bel, or the Lord. He is represented in clay figurines as an old man. He was one of the ancient trinity, of which the other members were Anu, the heaven, and Ea, the wise god of the deeps. But Bel especially was the Lord; his temple at Nippur was the great temple, and is constantly referred to as such in the Assyrian inscriptions. His special and peculiar name was En-Lil, or the Lord of the Storm, and the temple was commonly known as the House of En-Lil, just as the temple at Jerusalem was called the House of Yahweh. His was the central worship of the temple, with its priests and temple musicians, its sacrifices and its psalms. Figurines of the musicians we found in considerable numbers, but their only instruments were a sort of tambourine or drum and a double pipe; the same instruments which are in use among the natives of the present day. But, as in the temple at Jerusalem from Solomon's time to that of King Josiah we find, beside the main sanctuary dedicated to Yahweh, minor shrines consecrated to the worship of Ashtaroth, the Sun, and other divinities, so the inscriptions found at Nippur prove that Beltis, Nuzku, Ninib, and probably other divinities were worshipped by the side of Bel within his temple, as though he were the one supreme god and they his

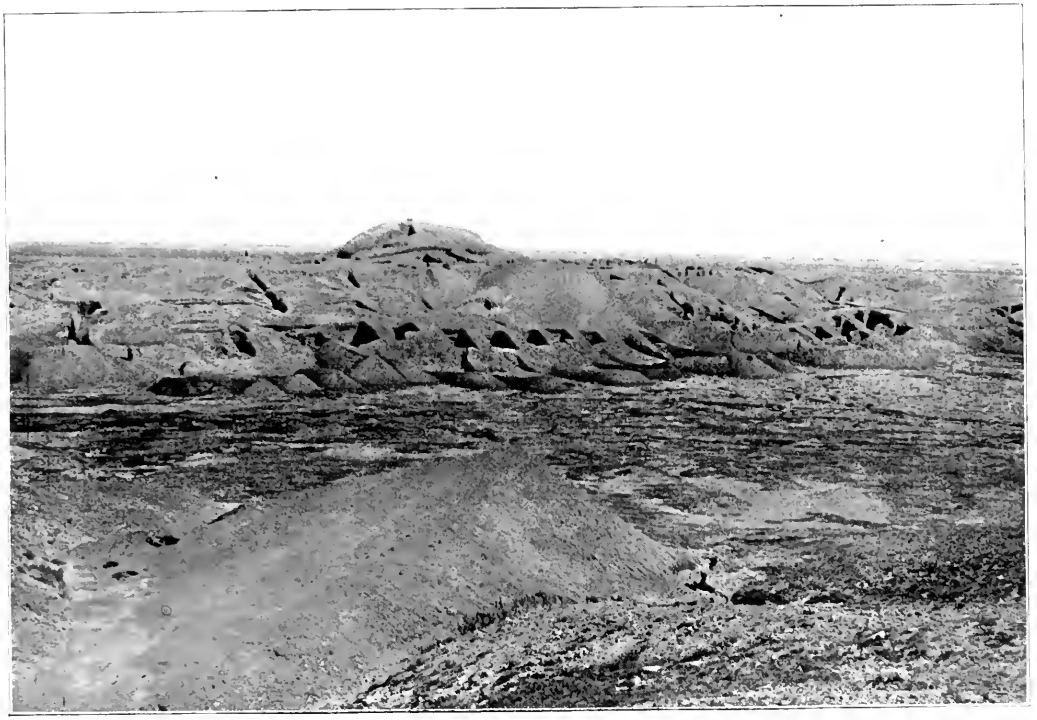
satellites. In fact, the Babylonian religion is almost a compound of monotheism and polytheism. One moment a god is addressed as though he were one and supreme, and you are ready to imagine that the other gods are but his manifestations or attributes; and the next moment they are invoked as independent beings, his equals or even superiors, and you find yourself in the midst of a crude and sensuous polytheism. Again, through everything runs the dualism of sex. Each god has his female counterpart; and so next in importance to Bel in the worship of this temple stood his Beltis, or Ishtar. Her worship was evidently obscene, and from an episode in the epic of Gilgamesh we may conclude that the phalli scattered everywhere through the chambers and about the walls of the temple were used in connection with her cult.

Again, as in the pre-exilic religion of the Hebrews we find minor high places or shrines of Yahweh at the gates, so here we discovered on a raised platform without the great southeastern wall, but just within the entrance of a second enclosure, a small shrine of Bel, erected by King Bur-Sin of Ur about 2500 B.C. This consisted of two rooms, the foundations of which we found built of bricks laid in bitumen. All the bricks were inscribed with the name of the king, and at each doorway was a diorite door-socket with a dedication to Bel. This little sanctuary faced inward toward the great temple, its door to the northwest, and behind it was a sort of half court, formed by the projection of the side walls. Near this stood a well, connected in some way with the religious rites, and in the court or about the shrine were statues. These had been removed or destroyed, and their existence was attested only by fragments. From these fragments it was manifest that the material and workmanship were the same as those of the famous statues discovered by de Sarzec, at Tello. Indeed much about this little shrine reminded me of a temple discovered at that place.

The Bel temple at Nippur was, as I have already stated, probably the greatest and most revered temple of Babylonia until the time of Nebuchadrezzar, and was doubtless the goal of many a pilgrimage. At the time of the great festival of Bel the city must have been crowded with pilgrims, from regions as far away as Assyria, who had come to pay their vows and feast before their god. Prof. Sayce has conjectured that swine's flesh was eaten at these annual feasts, and that the swine was sacred to Bel, of Nippur. This conjecture finds some confirmation in a small clay bas-relief of a boar which we found in an outbuilding of the temple, possibly a caravanserai for well-to-do pilgrims. This was either a votive tablet to be deposited in the temple in connection with a vow, or an object of piety to be carried away as a sacred relic. The swine seems to have been taboo, or unclean, in Southern Babylonia, or at least, in the territory of Nippur, in the sense that his flesh was forbidden for unhallowed use. And this throws light on the origin of the Hebrew prohibition of swine flesh. Forbidden at first as consecrated to a god, by a process familiar to a student of such practices, it finally came to be regarded as unclean in our sense of the word.

Pilgrims from the north came to these feasts by water, entering the city by the Nil canal. From this a branch was conducted into a basin in front of the southeastern wall of the temple. Along the edge of the basin, above the quay, ran a line of booths, or store-rooms, built of unburned bricks, forming on this side a sort of outer enclosure. In the centre of this line was an entrance within which stood the ancient shrine of Bur-Sin, alluded to above. In those booths may have been sold objects needed by the pilgrims. Three booths, immediately to the right of the entrance, were occupied by the manufacturers of votive objects. In the central one of the three we were fortunate enough to find a considerable amount of stock. This had been contained in a large

wooden box set in a corner of the room. By some catastrophe the booth was demolished. The earth roof and the upper part of the walls fell in and buried the box. Slowly it decayed, leaving evidences of its existence in carbonized fragments, and in the long copper nails by which it had once been fastened. We found its contents, heaped together, softly reposing in the protecting earth. There were quantities of small round coin-like tablets of lapis lazuli, variously dedicated to Bel, Beltis, Ninib, and Nuzku, sometimes bearing in addition the name of some king of the Cossæan dynasty of Babylon (1450–1140 B.C.), and a prayer for his welfare. Other similar tablets were made of agate, cut in cameo fashion. Other votive objects in malachite, turquoise, lapis lazuli, and agate were cut in different shapes, and many of them were perforated with holes for suspension. I am inclined to think that while some of these objects were meant for suspension at various shrines in the temple, others were intended to be carried or worn as charms, and aids to devotion. Those which bore the inscription dedicated " for the life " of such and such a king, were, I imagine, a sort of masses said for the repose of his soul; for in Babylonian, as in Hebrew, soul and life are identical. A king might order a number of inscribed tablets prepared for his " life " or the " life " of his parents or grandparents, some for deposit in the temple archives as a memorial before the god; some to be distributed to the pilgrims, that in their devotions his name and service should be recorded. Some tablets of the kind intended for deposit in the temple archives we found in process of manufacture. Among these was a fine inscription of twenty lines on a block of lapis lazuli, ending with imprecations against the man who should profane it or divert it from its use. This was dedicated in the name of a certain Kadashman Turgu, in the Cossæan tongue, or Tukulti-Bel, Trust in Bel, in the Babylonian, who reigned



Temple Hill from the southeast toward the middle of the second year. In the background, the Ziggurat; in the foreground, the line of Booths of the Cossæan period.

from 1257 to 1241 B.C. The inscription of a smaller tablet in the name of King Kurigalzu II. (1306–1284) had been completed, and the tablet partly cut off from the block. One heart-shaped agate tablet, perforated for suspension, bore on one side a dedication to Beltis "for the life of Dungi, the powerful champion, King of Ur;" and on the other an inscription to say that Kurigalzu, King of Karduniash, conquered the palace of Susa in Elam and presented this to Beltis, his mistress, for his "life." It had been consecrated to the service of the goddess about 2750 B.C.; carried off by the Elamites in some of their conquering, plundering tours, five hundred years later; recovered by Kurigalzu a thousand years later; re-inscribed and consecrated in the temple at Nippur. Certainly here was an eventful history! We found one seal cylinder, unusually large, but of the same general type as those which the wealthy Babylonians wore about their necks, containing a religious device, and sometimes an inscription recording the name and parentage of the owner. Another seal cylinder was in the works. Indeed the objects found were in all stages of completion and incompletion, from blocks of raw material and fragments of unworked gold up to the finished product, ready to be dedicated in the temple, or sold or distributed to pious pilgrims at the next annual festival.

Among the other contents of this shop were more than twenty objects of a curious white substance, soft as chalk on the outside, but hard as marble within, and several unworked blocks of the same material. Some of these objects were of a columnar shape, broadening at the top, a conventionalized form of the phallus. But the majority had lost the columnar form and were flattened into the shape of a door-knob. These were pierced with a large hole, and inscribed around the edge or the base. There were seventeen of this shape in all, together with an eighteenth made of ivory. An analysis of the material,

made by Professor Koenig, late of the University of Pennsylvania, proved it to be magnesite from the island of Eubœa, the only place where this substance is found, and from which it is now exported to this country for use in soda-water fountains. Here, then, we have an evidence of trade and intercourse with Greece, probably through the medium of the Phœnicians, as early as the fourteenth century B.C. The material, which was evidently rare and highly prized, seems to have been imported into Babylonia principally for the manufacture of a peculiar white pottery glaze, much esteemed in ancient Nippur. The lapis lazuli was brought from Bactria, where the ancient mines, still worked, "are 1500 feet above the bed of the River Kakcha, a tributary to the Oxus from the northern flanks of the Hindoo Cush mountains."

But the most interesting part of this shop "find" was, perhaps, a quantity of badly broken inscribed axe-heads of a highly ornamental shape. These were of a blue material so closely resembling azurite and lapis lazuli that I at first reported them as such. An analysis by Professor Koenig proved, however, to his astonishment and mine, that they were of glass, exhibiting a high degree of art, and generally identical in manufacture with the famous Venetian glass of the fourteenth century A.D. The blue was colored with cobalt, brought presumably from China, and made to imitate lapis lazuli; and some green glass, a few specimens of which we also found, was colored with copper to imitate turquoise. All the glass objects found at this point had been run in moulds and not blown. Here was a discovery for which I was not prepared; glass, the presence of which in Babylonian and Assyrian mounds had been generally supposed to be a sign of comparatively modern strata, manufactured in the fourteenth century B.C. by the same methods, and with the same excellence, as the famous glass of Venice.

All these glass axes bore votive inscriptions, and one poetical dedication reads:

"To Bel, lord of lords, his lord, Nazi-Maruttash, son of Kurigalzu, has made and given for his life an axe of polished lapis lazuli;
His prayer to hearken unto;
His petition to accept;
His sighing to hear;
His life to protect;
His days to make long."

Nazi-Maruttash, King of Babylon, who dedicated this axe, reigned from 1284 to 1258 B.C. Indeed, all the objects found in the "shop" belong to Cossæan kings of Babylon, and cover a period of over one hundred and fifty years, from the beginning of the fourteenth to the end of the thirteenth century. It is the same period to which belong the inscribed Babylonian tablets found in Tel-el-Amarna in Egypt in 1888, and the similar tablet more recently found at ancient Lachish, near Gaza, in Palestine. The last-mentioned tablets, and others found in Cappadocia show that at an early period the Babylonian language and script were the medium of international communication between all the countries of Western Asia, and even with outside nations like Egypt. Babylonia was evidently in close contact with the whole civilized world, and a chief factor in its progress. Politically, at this period, it was inferior to Egypt; nevertheless there was communication between the courts of these two countries. So Burnaburiash(1342–1318 B.C.) writes about a matrimonial alliance with the Egyptian king, and presents are exchanged between the two monarchs. So much we learned from the tablets of Tel-el-Amarna; and now, since our discovery of glass at Nippur in the time of Kurigalzu, Burnaburiash, and their successors, Petrie has discovered glass of the same description and the same period at Tel-el-Amarna. A few fragments bearing inscriptions of an earlier date have been discovered elsewhere in Egypt, and from its treatment it is evident that

there, as in Babylonia, it was regarded as a precious thing; fit offering for the gods. It was probably foreign to both countries. But who invented it? I think that, although the earliest discoveries have thus been made in Egypt and Babylonia, with Greek tradition we must ascribe its origin to the Phœnician coast, and suppose that, at least in the earlier periods, it was manufactured in Egypt and Babylonia by artificers imported from that region.

It may seem strange that this little hillock containing these precious antiquities should have been allowed to exist untouched during all the following centuries of the temple's history. But this very fact is characteristic both of the past and present methods of building in Babylonia. If a mud house go to ruin, its contents are not likely to be disturbed; for, even should another building take its place, it will probably be built without excavation upon the débris of its predecessor. A notable instance of this we found in the temple proper. The chambers and corridors which I have described as occupying the space within the walls rested on a mass of débris and rubble at a depth of about eighteen feet below the surface. In order to ascertain the meaning and nature of this formation I sank a well in one of the chambers, not far from the south-eastern face of the ziggurat, and ran out tunnels at various depths. In one of these, thirty-seven feet below the surface, I found an alabaster vase with the name of a hitherto unknown king, "Alusharshid, King of Kish." The almost hieroglyphic form of some of the characters proved this to be very ancient, and I at once commenced to remove the chambers at this point, with the intention of excavating a section between the outer walls and the ziggurat down to bed earth. I found at all depths the remains of earlier buildings of sun-dried bricks, but nothing which I could date with any certainty until I had reached a depth of twenty-eight feet. There were foundations of the construction of Ur-Gur, 2700 to 3000 B.C.;

up to that time supposed to be the original founder of the temple. Still descending, we came upon great quantities of inscribed fragments of alabaster and marble vases of the same hitherto unknown king, one of which, deciphered by Professor Hilprecht, bore the inscription: "Alusharshid, King of Kishatu, presented to Bel from the spoil of Elam, when he had subjugated Elam and Bara'se." Then we found at about the same level, thirty-seven feet below the surface, three diorite door-sockets of Sargon, King of Akkade, the very oldest king of whom we had any knowledge, bearing inscriptions to the effect that he, king of the city, had built this temple to Bel, and also informing us that he was a great conqueror, and that he had conquered among other lands Elam, and ending with an imprecation on the man who should remove or injure the stones consecrated by him. There was an inscribed tablet found here, and several brick stamps of the same king and his son, Naram-Sin, beloved of the moon-god, were also found at other points. These inscriptions were the oldest ever found up to that time in Babylonia, but later, both Mr. Haynes and I found a few inscribed objects at a slightly lower level, and similar inscriptions have been found at Tello. But early as these inscriptions were, the temple of Bel proved to be yet earlier, for below them for another ten feet I found the same débris full of the remains of still older walls, but, unfortunately, without inscribed bricks or stones, and Haynes' excavations extended still deeper with the same result. Only at one point, beneath the ziggurat, below plain level and not far above the level of virgin soil, I found an inscribed tablet.

It may be asked, why do these inscriptions possess such importance? Sargon, or more properly Sargina, is almost the first great name which comes to meet us out of the shadow-land of prehistoric times in Babylonia. He commenced a series of astrological records, or omen tablets. Astronomical occurrences were recorded, and in

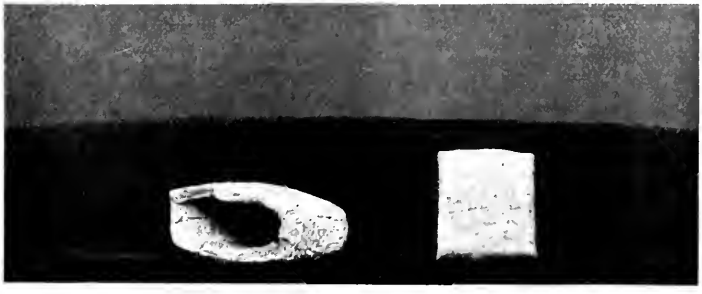
connection with them such historical and other events as were regarded as their consequences. By consulting these, and observing what astronomical phenomena had been followed by favorable or unfavorable results in the past, it was supposed that omens could be derived for the conduct of the future. This system of records, begun by him, was continued to a late period, and it is chiefly from fragments of transcripts and summaries of his omen tablets, found in the library at Nineveh, that we derive some knowledge of his life and reign. Beginning as King of Agane, or Akkade, in Northern Babylonia, he succeeded in uniting the whole country under his rule. Not content with this, he carried his victorious arms to the coast of the Mediterranean, and even conquered the island of Cyprus. To the southwest his kingdom extended as far as the peninsula of Sinai, whence were brought the door-sockets found by us at Nippur. In the southeast he conquered Elam, in modern Persia. The story of his life is mixed with myth. Born of the daughter of a princess by some unknown father, he was exposed on the river in a basket smeared with pitch. Rescued by a waterman and reared as his son, a goddess saw and loved him and raised him to honor. Such is the curious story, reminding one involuntarily of the story of the great lawgiver of the Hebrews.

For the determination of his date we are indebted to Nabonidus, the last king of Babylon. He was something of an archæologist, loving to restore ancient things, and at the same time to explore their origin. Among other temples he restored that of the Sun at Sippara. This was said to have been built by Naram-Sin, and Nabonidus was anxious, so he tells us in an inscription found a few years since, to see the original archives of its erection, deposited by him. But to find them was a difficult task, since building had been built on building, much as at Nippur. Finally, he called up his army from Gaza and set

them to remove everything until they had found the original archives. At last they were successful, and he gazed upon the inscription of Naram-Sin, "which none before him had seen for thirty-two hundred years." As Nabonidus ruled about 550 B.C., this would give Naram-Sin's date as 3750, and that of his father, Sargon, as 3800 B.C., which is generally accepted by assyriologists. Of course the round number in Nabonidus' account is suspicious, and still more the fact that it is a multiple of forty. Remembering how in the Bible forty is so often used to mean a generation, and even in one case four hundred and eighty is used to mean twelve generations (1 Kings, vi., 1), I once thought it probable that Nabonidus had reckoned his thirty-two hundred in the same way, counting from the lists of kings who had preceded him, and making out of those eighty generations at forty years thirty-two hundred; just as the Hebrew chronicler writing in Babylonia had made out of twelve generations four hundred and eighty years. If this argument were valid, then the thirty-two hundred years of Nabonidus' inscription would have to be reduced considerably, and we should be compelled to date Sargon of Akkade not in 3800 B.C., but in 2800 B.C., or even later. Inasmuch, however, as very ancient tablets found at Tello and Nippur show us that at a remote period there was a system of dating by means of the events in the reigns of different kings,—the tablets being dated in the year after such a king did such and such a thing, etc., giving evidence that there was some sort of chronology in those early days,—I should no longer wish to press this argument; but it should be borne in mind that the earlier dates are as yet more or less a matter of conjecture. From about 2300 B.C. onward, everything is reasonably accurate, for we have almost complete lists of consecutive kings of Babylon, and means of ascertaining their dates, but from that date backward there are still many gaps and much is conjectural.

Such, in a general way, were the results of our excavations. We failed to find historical inscriptions and the temple library for which we looked; but, on the other hand, we succeeded almost beyond our expectations in unearthing records of a hoary antiquity, and in reconstructing an ancient Babylonian temple of the first rank. But if we had failed to find a temple library, I would not have it understood that we failed to find tablets, and those ancient ones. We found many thousands of tablets, chiefly, of course, in a fragmentary condition. At one place, on the opposite side of the canal from the temple, we discovered a sort of registry of records. Thousands of inscribed clay tablets, for the most part unbaked, had been stored in one room on wooden shelves along the walls. The roof had fallen in and the shelves decayed away, and the tablets lay in fragments buried in the earth. So numerous were they that it took thirty or forty men four days to dig them out and bring them into camp. These, as well as the great stores of tablets found in other places, are largely business and official records, but they include also "syllabaries, letters, chronological lists, historical fragments, astronomical and religious texts, building inscriptions, votive tablets, inventories, tax lists, plans of estates," etc., and much time must yet elapse before all shall have been fully examined. The details of these discoveries will be found in another chapter.

A Mortar of Volcanic Stone ; and fragments of inscribed Bas-relief in Diorite. Found in neighborhood of shrine of Bur-Sin, on Temple Hill. Circa 2500 B. C.



Clay Contract Tablet. Inner Tablet and Envelope. From the time of Abraham or a little earlier.

CHAPTER V.

THE OLDEST TEMPLE IN THE WORLD.

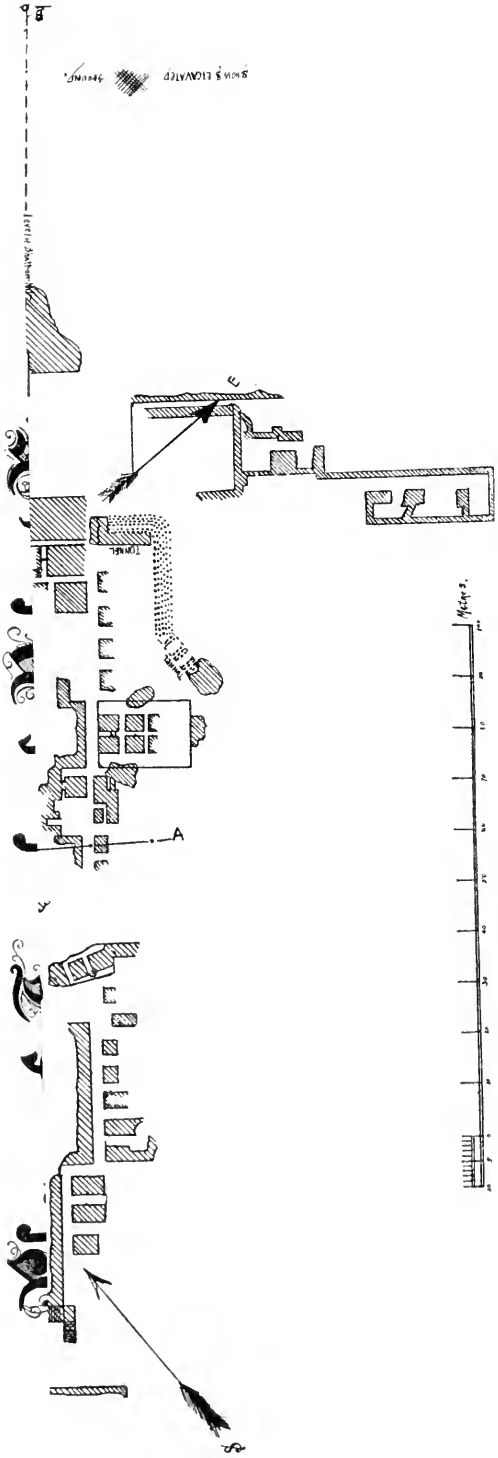
Explanation of the Plan—General Appearance—Jewellers' Shop—Archaic Structures—Ancient Quay—High place of the Gate—Latest Stratum—Last Reconstruction—Three Periods—The Towers—Jachin and Boaz—Ur-Gur's Terrace—Evidences of Iconoclasm—A Sounding Well—Ur-Gur's Ziggurat—Rebuilding the Ziggurat—Inscription of Ashur-banipal—Other Builders—Beneath the Ziggurat—The Oldest Inscription—Virgin Soil—Meaning of the Strata—History of the Temple—Jerusalem and Nippur.

THE preceding chapter has given a general summary of the results of our excavations at Nippur in the years 1889 and 1890. It is the object of the three following chapters to give a somewhat more detailed account of the excavations themselves by means of a plan and maps, and the reader who does not care for such details is politely requested to skip these chapters.

The accompanying plan will give some idea of the temple enclosure at the close of the first two years' excavations. The shaded portions on this map represent actual excavations, and the white surface those parts which were left untouched. The straight lines represent walls, and the irregular lines edges of trenches which are not walls. Where not otherwise indicated those walls are of unbaked brick. Brick walls of three different periods are represented by three different forms of marking, as explained on the plan. It will be observed that the ziggurat on this plan has wing-like or buttress-like projections on all four sides, and is curiously irregular in form.

The ziggurat as here shown is composed of two stages, represented by the "exterior wall" and the "interior wall" respectively. About it on all sides we found rooms or corridors. These covered a space of something over eight acres, and were enclosed by a huge wall, which stood toward the southeast to the height of over sixty feet, and was almost fifty feet thick at its base, and thirty feet at the summit. On the top of this "great wall," on the southeastern side, was found a series of rooms, fourteen in all, at uneven distances and of different sizes. There were irregular tower-like masses at three of the corners of this wall. The western corner and a part of the southwestern side near the western corner could not be found at all, having been, apparently, destroyed by water. Some transverse walls in this neighborhood suggested that there may have been an entrance through the great wall on the southwestern side. At the eastern corner there was a singular blunder, owing to the lack of instruments of precision, by which the angle was made obtuse instead of right, thus giving the enclosure a curiously irregular shape. At this corner there was a confusing arrangement of outside walls of different dates, the connection of which with the great wall it was impossible to determine. On the northeastern side there were appearances like those on the southwestern, which suggested a possible entrance to the interior, but at a point where the upper levels were much washed away. At the southern corner a series of rooms or buildings had been attached on the western side, connecting the temple with the next series of mounds so closely that they constituted almost a part of it.

The general level of the enclosure within the great wall below the ziggurat was fourteen metres above plain level, but there were in various parts deep holes and gullies formed by the water, and especially was this true towards the eastern and western corners, at gate-like points on the



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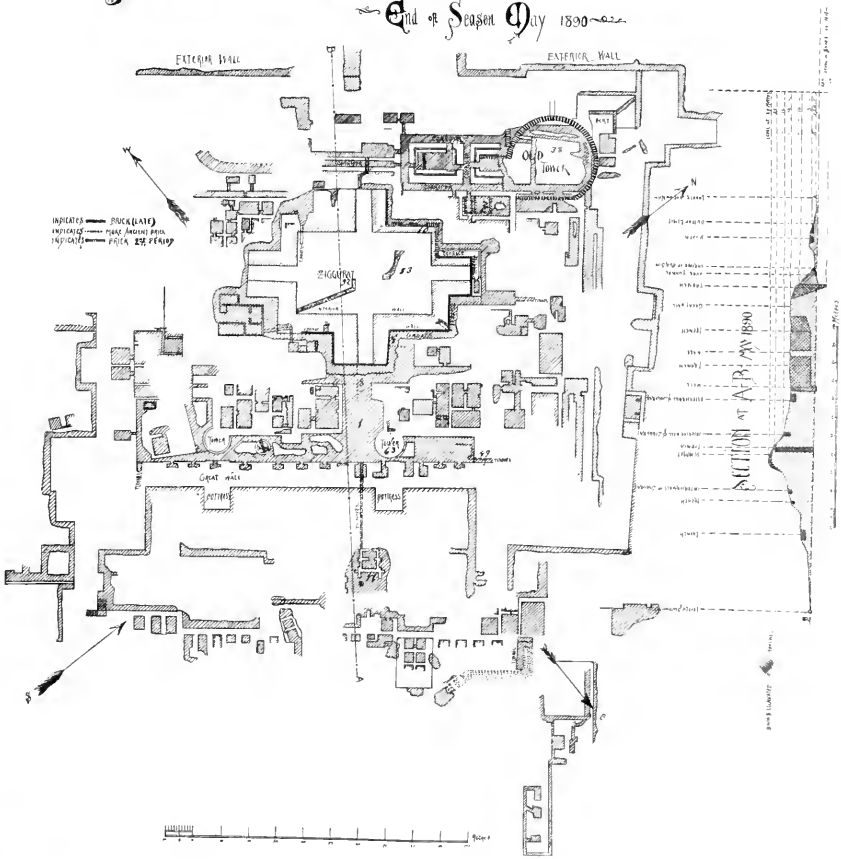
Plan of Temple of Bel, at Nippur

After the Excavation of the Babylonian Expedition

End of Season May 1890



southwestern, northwestern, and northeastern sides, and on the plateau itself a little to the south of the ziggurat, where all the upper strata had been swept away by water. The corners of the great enclosure and the ziggurat itself were not accurately orientated—the northern corner of the ziggurat pointing twelve degrees east of the magnetic north. The total length of the great wall on each of the southeastern and southwestern sides was two hundred metres. This was somewhat increased on the northeastern and northwestern sides by the error at the eastern corner already mentioned.

Turning to the section A,B, we obtain a general view of the contour of the mounds. Moving from southeast to northwest there is first a low mound rising four metres above plain level, behind which again is a depression or gully, the latter sinking to the level of one and one half metres. Comparing the section with the plan, it will be observed that this four metre elevation was a low wall-like mound stretching across the southeastern front of the temple, and containing, for the most part, a single row of rooms. These rooms being excavated, proved to rest on a terrace of earth, about a metre above plain level. The walls were of unbaked brick of large, almost square blocks. In the room of this row through which the section line A,B, runs, in the northern corner of the room, were found large numbers of inscribed objects of ivory, glass, turquoise, agate, malachite, lapis lazuli, magnesite, felspar, etc., some in the process of manufacture, and some complete, together with gold, amethyst, porphyry, and other material not yet worked. All these had been contained in a wooden box which had been buried by the falling in of the earth of the walls or roof and decayed away, leaving signs of its existence in long copper nails, in the position of the objects when found, and in some slight traces of oxidation left in the earth by the decaying wood. These objects were found from one and a half to two and

a half metres below the surface. The inscribed objects in this treasury belonged to the kings of Babylon of the Cossæan dynasty from Burnaburiash, 1342 B.C., to Bibeiashu, 1211 B.C. This is the room which I have designated as "the jewellers' shop." A few of the small inscribed tokens, about as large as an old-fashioned copper penny, were found in the two adjoining rooms also, and one or two more were found below the Camp Hill, on the other side of the canal, and at other points on the hills. This discovery showed that the buildings in this outer wall line belonged to the Cossæan period, and were destroyed not earlier than the beginning of the twelfth century B.C. No later buildings were erected at this point, but here and there, and especially on the ruins of a tower-like portion of this mound, a little to the right of the section line, containing six rooms clustered together, we found later burials of the Parthian period. It was from this tower-like structure that we took the Seleucidan or Parthian coffin for the Constantinople Museum.

The long and peculiarly shaped attachment projecting at right angles from the southeastern wall at the eastern corner, was of the same general character as the low mound line just described, containing rooms of mud brick resting on a terrace of earth slightly elevated above the plain. No objects were found in the rooms in this projection, nor in the rooms of the mound line just described, except the Cossæan treasury in the "jeweller's shop," and the late burials already referred to. But if no later buildings were erected at this point, there had existed earlier constructions. To the southwest of the "jeweller's shop" and the section line there is a gate-like breach in this mound line. This corresponds pretty closely with an entrance through the great wall, which we know to have existed in the year 2400 B.C., and presumably also at the time when these structures of the Cossæan period were erected. Digging in this opening

we found a series of rooms, the mud walls of which were so destroyed by fire and water that only a small portion of them could be traced. Here we found a well of pottery rings, and some curious pieces of pottery. At a depth of five metres below plain level we reached virgin earth. These walls belonged to the buildings of the most ancient period of the inhabitation of Nippur, and their situation in relation to the later structures about and above them shows that if the temple existed at the time when they were built, its arrangements were different from those existing in Ur-Gur's time. In his day there was an open space or gateway here, and these structures were already buried beneath the earth. We also conducted excavations in front of the tower-like structure described above on the outer southeastern mound, finding an ancient smithy and the inevitable well-drain of pottery rings, but no objects.

As the small plain in front of this wall line looked as though it might have been a basin connecting with the Shatt-en-Nil, and as it is still known to the natives by the name of Shatt-en-Nil, I undertook excavations to the eastward of the six-roomed tower, in search of a quay to the canal. I found, considerably below plain level—over five metres below that level at its lowest point—a curious construction of brick, as indicated by the dotted lines. The bricks of this construction were laid, not in bitumen, but in mud. At the southern end was a step-like construction running out at an angle, like the arrangement seen in quays in the modern towns of the region; but I could find no other evidence that this had ever constituted a quay to a canal. There were numerous restorations and additions to this wall, which must have belonged to an extremely early period. To the west it turned out into the plain at an angle, as indicated on the plan, and after descending in steps, ceased altogether. At the other end it curved at right angles with its former course and

entered a mound, near the summit of which, and much earlier in date, was a platform of large bricks bearing an inscription of Ishme-Dagan, of Isin, 2600 B.C., or thereabouts. I followed it under this mound as far as possible by a tunnel. It belongs to those unexplained structures of the very earliest period, of which I found fragments here and there, but which I was unable to explore thoroughly, or to date accurately.

In the depression to the northwest of the outer mound line, marked "booth" on section, I ran trenches to virgin earth, which was there some five metres below plain level. Here I found a few fragments of mud-brick walls, altogether ruined, of the same period as those in the gate-like opening. In the débris above them, in the neighborhood of the "shrine of Bur-Sin," we found a pair of clasped hands from a diorite statue similar to those found by de Sarzec at Tello; several inscribed fragments, including three fragments of bas reliefs; and an archaic-looking mortar of volcanic stone. These objects are reproduced in the plate facing page 140. They belong to the period of about 2400 B.C., and had evidently fallen from the platform about the shrine of Bur-Sin.

Beyond this gully or depression was a steep hill ascending abruptly to the plateau of the temple, fourteen metres above plain level. At a point on this ascent some two or three metres above plain level we found, on a platform of burned brick, a small shrine of Bur-Sin, indicated on the plan at No. 11. The walls of this shrine were built of burned brick laid in bitumen, and from seven to fourteen courses were still in place. Almost all of these bricks bore a brief dedicatory inscription to Bel by Bur-Sin, King of Ur, often repeated several times on the same brick; and in each of the two doorways, the outer and the inner, were found diorite door-sockets bearing longer inscriptions by the same monarch. As we found it, this little building faced against the huge towering wall, under the débris

from which it had been buried; but at the time of its erection either the wall did not rise above the level of the platform of this temple, or if it did, there was in it at this point a large opening serving as an entrance to the temple. Walls of brick of Ur-Gur, 2800 B.C., we found buried in this great wall. These were part of a causeway ascending from a point about on a level with, and nearly in front of, the shrine of Bur-Sin to the top of the first terrace of the ziggurat. (A fragment of this causeway is indicated at 8 on the plan.) This shrine, therefore, held in relation to the ziggurat a position somewhat similar to the "high places of the gates," mentioned in the Hebrew Bible (as, for example, 2 Kings, xxiii., 8).

An earlier king than Bur-Sin, Lugal-kigub-nidudu,[1] King of Ur, some time about or before 4000 B.C., scratched his inscription on the side of one of the blocks of stone afterwards utilized as a door-socket by Bur-Sin. This same monarch's name is inscribed also on door-sockets and other offerings of several ancient kings, found by me at Nippur, including one of the door-sockets of Sargon. His inscriptions also stand by themselves on three large, rude, marble stones, which we found within the temple enclosure. These inscriptions are extremely rude and barbarous in appearance.

On top of the ruins of this shrine of Bur-Sin, immediately below the shrine and apparently belonging to it, was a well of bricks laid in bitumen, which we sounded to the depth of 6.20 metres. How much deeper it descended I do not know, for as we found no objects within, but only a closely packed mass of rubble, which it was exceedingly difficult to remove in such a narrow place, we stopped work at that point. I fancy that the statuary, of which we found fragments in the gully beneath, stood, in

[1] Professor Hilprecht in the first part of his *Old Babylonian Inscriptions*, identified this king as Gande or Gandash, founder of the Cossæan dynasty. He corrects this in the second part of the same work.

part at least, on this side of the shrine. Above the ruins of this little shrine we found a poor wall of mud brick with no clue to its age, and above this an immense mass of loose débris which had slipped down from the temple plateau.

The "great wall" was of colossal proportions. It had a slope of 1 in 4. At the bottom it was fifteen metres in thickness; and at the top, as it at present stands, nine metres. For fourteen metres below the level of the plateau this wall was built entirely of unbaked brick, but below this for 5.3 metres it consisted of earth faced with a casing of baked brick .90 metres in thickness; and the slope of this lower part was less than that of the upper. That the whole was not homogeneous and constructed at one time was clear, among other things, from the fact already mentioned, that a portion of the brick causeway, by which in Ur-Gur's day access was had to the upper stages of the ziggurat, was embedded in it. (Further along the wall, to the northeastward, we found another piece of a wall of Ur-Gur embedded in this same great wall.) It was plain that a wall had existed here from time immemorial, which was repaired and built upon by many builders of many ages, until it reached its present height. I am inclined to think that the original wall rested upon bed earth at the depth of 19.3 metres below the fourteen metre level; to which point we conducted our excavations. (The section shows a depth of only four metres below plain level at this point, but after this plan was completed we conducted the shaft to a further depth of 1.3 metres.) Originally, as shown by a fragment of a transverse wall found at a very low level, and by the fragments of the causeway of Ur-Gur already referred to, there was an entrance over this wall on the southeastern side, which entrance was in existence certainly as late as the time of Bur-Sin, 2400 B.C., and probably, as already stated, as late as the constructions of the Cossæan period; that is until

some time in the twelfth century B.C. During all this period this wall, as it then existed, was the retaining wall of a great terrace.

The buttresses indicated on the great wall in the plan do not belong to the earliest construction, as is shown by the fact that the brick facing at the bottom, already referred to, runs behind and not around them. The transverse walls forming towers at the southwestern and northeastern ends of this wall are also later, as wells sunk at these points showed that the brick-faced wall ran on in a straight line underneath them. At the time of the last great reconstruction this terrace wall was raised to a much greater height and made a true wall; perhaps for purposes of defense. After that there is no trace of an entrance on the southeastern side. At that period rooms were built on the top of the wall, as shown in the plan. This new wall stood above ground to the height of 5.5 metres; all below that being the retaining wall of the terrace within. That terrace, as we found it, was composed largely of débris, but in many places, especially along the line of the walls, there was a filling of unbaked bricks in large, square blocks. This was especially true at the southern corner, where we excavated to a depth of 11.5 metres, that is, to the Sargon level. At the time of this last reconstruction the great wall was continued in substantially its present form around the entire temple area.

Within this outer wall, there was, on the southeastern side of the temple, as will be seen from both the section and the plan, an inner wall with two irregularly circular towers. The depth of this wall was 9.5 metres, which carries us down to the Ur-Gur level, and it was apparently first built by that king, 2800 B.C. It was repaired and added to, however, from time to time, and received its present form at the time of the last great reconstruction. As we found it, in the upper five metres of its surface, it was beautifully plastered and stuccoed, while the lower

4.5 metres consisted of plain unplastered blocks of unbaked brick; that is, at that time the upper five metres stood above ground, and the lower 4.5 metres were buried in the terrace.

At the time of the last great reconstruction the space between these two walls formed a passage-way or corridor. There was no gate through either the outer or the inner wall on this side of the temple. The only egress from the corridor was toward the southwest, but exactly whither the passage on that side ultimately conducted it was impossible to determine, on account of the destruction of the upper western surfaces by water. In the corridor itself was a curious tower, wholly without a door, which we penetrated by a tunnel without finding anything within. It belonged to the period of the last reconstruction. The two towers attached to the wall itself were solid, with parapets on top. The inner wall is represented on the section as standing, and on the plan as removed. It was removed at the very close of the excavations in the second year, and a great trench was carried from the outer wall up to the buttress or wing of the ziggurat, in which all constructions were removed down to the Sargon level, 11.5 to 12 metres below the top of the fourteen metre level. This is the trench marked 1 on the plan. Mr. Haynes more than doubled the size of this great trench, extending it toward the northeast, and also carrying it northwestward through the projecting southeastern wing of the ziggurat up to the line of the inner and more ancient construction. He also removed all additions to the ziggurat itself on all sides until he had reached the original construction of Ur-Gur.

As will be seen from the plan and section, the great trench was carried in the first two years only up to the southeastern wing of the ziggurat; but another trench was carried around the entire ziggurat, and that structure was explored through all its strata by means of tunnels and

cuts, by which we were able to ascertain that there was another and older ziggurat inside of that which our excavations had laid bare. The cut through the core of the ziggurat (52) showed us that there was at the highest point a solid mass of unbaked brick, twenty-three metres in depth. The outer casing of this, about two metres in thickness, was composed of unbaked bricks in large blocks, similar to those used in the rooms and corridors on the plateau below the ziggurat, and in the great walls of the last reconstruction. Beneath this the ziggurat was homogeneous, consisting of unbaked bricks of small size, in shape not unlike the ordinary bricks in use to-day. These were the characteristics bricks of Ur-Gur, and were laid in three ways—first a layer on the sides with the ends out; then a layer on the edge with the flat sides out; and then a layer on the edge with the ends out. These bricks were often somewhat crushed out of shape by the weight resting on them. It was in the outer casing that the goose egg, described in the last chapter, was found. Below the ziggurat, at the point 52, the end and deepest portion of that trench, we found first a metre of black ashes and then a metre of earth, with occasional fragments of pottery; evidence that the ziggurat of Ur-Gur had not rested on an earlier ziggurat. In a cutting at the other end of the ziggurat (53) we descended about nine metres from the top. We found a different upper stratum at this point, and so many baked bricks as to suggest the existence here at some period of a brick structure, but all surface layers of the ziggurat, of the later and earlier periods alike, were so ruined and worn away by the action of water that it was impossible to reach certainty upon this matter. Here, and in the débris to the northwest of the ziggurat, we found fragments of glazed bricks[1] like

[1] Identified by Hilprecht in *Old Babylonian Inscriptions*, vol. i., Part I., as Meli-Shikhu, king of Babylon, 1171–1154, but in vol. i., Part II., as Ashurbanipal.

those found at Birs Nimrud, some of them having an inscription of Ashurbanipal. As will be seen from the section, the ziggurat was much steeper on the northwestern than on the southeastern side. It also stood much closer to the edge of the plateau. The accompanying plate gives a view of the northwestern side of the ziggurat and the Temple Hill, and of our excavations there toward the close of the second year.

Before the excavations began the ziggurat was an almost conical hill, known to the Arabs as Bint-el-Amir," Daughter of the Prince." About this on all sides was a plateau seamed here and there with very deep gullies. The general height of this was fourteen metres above plain level, and about nineteen metres, or something more, above actual bed earth. The ziggurat itself was ten metres higher than the plateau about it.

Turning to the plan one observes that the ziggurat as excavated by us was peculiarly irregular in structure. On both sides of the northern corner (10) there was a panel wall of brick. This is part of the ziggurat of King Ashurbanipal, the famous Assyrian monarch who reigned from 669 to 626 B.C. Everywhere else his ziggurat was buried under a new wall of huge blocks of mud brick.

In view of the great size of the temple area, which covered within its inner walls, as already stated, a surface of about eight acres, it was impossible to excavate the whole of it systematically, removing stratum after stratum. We therefore selected one section in which to do this, the section immediately in front of the ziggurat to the southeast. Between that and the great wall we conducted, as stated, a large trench with the view of ascertaining the successive strata. This enabled us to treat the wall on one side and the ziggurat on the other. Wells and similar shafts were sunk at other points of the temple, wherever a favorable opportunity seemed to present itself, for the purpose of confirming, checking, and reinforcing the results obtained from the excavation of this space.

Temple Hill from the northwest, about the middle of second year ; showing Ziggurat and northern corner of mounds. The western corner is not visible.

Our excavations in trench 1 showed first of all a surface-layer of about a metre of earth. In this upper layer, on the slopes of the ziggurat, were some poor walls of mud brick and remains of a number of rooms or huts of a late period. To the northwest of the ziggurat we found in this stratum two or three Jewish bowls, such as were found in great numbers in the Jewish settlement on the other side of the canal, where coins of the Kufic period gave us, as latest date, the seventh century A.D. Here and there on the plateau of the ziggurat were coffins and tombs which belonged to the same stratum, although the coffins themselves were frequently found at a lower level, which was to be expected, in the nature of the case. But all of these burials clearly belonged to this period, and not to the one below, because they were made, as shown by their position, after the structures beneath the one-metre level were in ruins. The earliest of them belonged to the Parthian, or possibly the Seleucidan period, and some of them were quite late Arabic. In this stratum, very little below the surface, was a layer of fine white ashes pretty evenly distributed over the surface of the plateau, at least on the southeastern side of the ziggurat; evidence, apparently, of the use of the hill by alkali burners. The remains of this upper layer of earth point to a period when the temple was no longer a temple, but merely a tel. At that time the side hill of the ziggurat was occupied by the huts of a small town, and the plateau beneath seems to have been deemed a fit place for burials. The coffins show us that this period began probably as early as 200 B.C., and the Jewish bowls and some Kufic coins found in this hill suggest some sort of occupancy as late as about the seventh century A.D.

Below this later stratum, or these later strata, we came to a series of constructions which belonged together, constituting one whole. Walls of unbaked brick stood to the height of about 4.5 metres. To the southeast, northeast, and southwest of the ziggurat there were at that time

series of rooms or houses. Immediately to the southeast of the southeastern wing of the ziggurat a long street ran northeast and southwest. To the northwest of the ziggurat there was a very fine series of corridors with a few rooms. The whole was bounded by the vast retaining wall already mentioned, and the upper portion of this wall, as well as of the inner wall on the southeastern side, belonged to this period. The characteristic feature of these constructions was the large, square blocks of mud brick of which the walls and houses were erected. The walls of the rooms and corridors were in almost all cases finely stuccoed with a plaster of mud and straw smoothly laid on, and many of them had been tinted, always seemingly in solid colors. I found green, pink, and yellow tints.

In the space occupied on the plan by the great trench (1), were rooms of the same character as those shown on both sides of that trench. (The plate facing page 122 represents the condition of this section at an earlier stage of the excavations; that at page 156, after the upper structures had been removed in the line of the great trench; while the plate facing page 160 is a view in the great trench itself.) In some of these rooms were found great masses of water-jars piled together. The two largest collections were found in a room or suite of rooms, opening by means of steps into the street mentioned above, directly in front of the ziggurat, in trench 1; and in a

A FIND OF LARGE WATER-FIRKINS IN A ROOM TO THE SOUTHEAST OF THE ZIGGURAT.

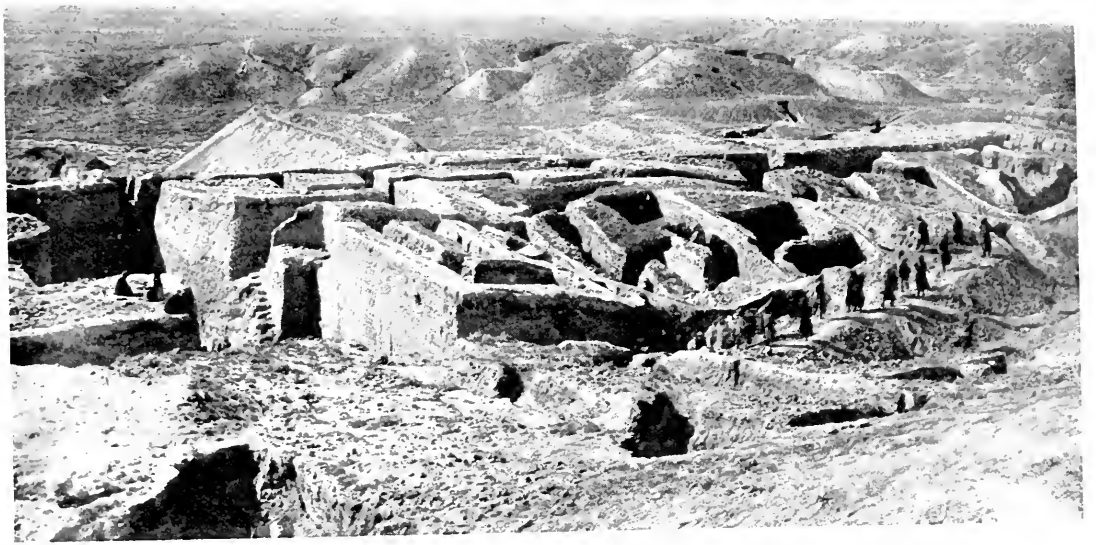
room some distance to the east of the ziggurat. Several of the rooms in this series of constructions were kitchens, as shown by the fireplaces and other arrangements found in them. In some of the rooms were curious closets with thin clay partitions, as indicated in the plan. In two of the rooms on the corridor to the north of the temple, there were enormous double walls with a curious passageway between, so small as just to admit of the passage of the body.

In all of these rooms and corridors the doors had been walled up from below once or twice; and all of the doors, as we found them, were at least 1.5 to 2 metres above the proper level of the floors, which occasioned us at first much perplexity. In the case of two of the doors opening into the street directly in front of the ziggurat to the southeast, we found steps descending from the street into the rooms; and in one case a curious projecting mass of mud brick built into the doorway. The floors of the houses had been originally on a level with the street. Gradually the street filled up with débris and mud washed down from the walls and roofs of the houses, and it became necessary to descend from the street level to the house doors by steps. These same conditions I found prevailing in some streets of the modern town of Hillah. The next step was to fill up the houses within to the level of the street, block up the old doorways, and cut out new ones, build an addition on the walls, and raise the roofs. Accordingly, the steps up to the street in the house in front of the ziggurat were blocked as we found them,* and a new door cut above the old one. This was repeated twice in the doorways opening on the street. In the interior of the houses or apartments, and in the corridors to the north, northwest, and west of the ziggurat there were but two sets of doors, instead of three, since the level of the interiors was only

* Haynes found precisely the same conditions when he continued the excavation of the street and the rooms adjoining it further to the northeast.

changed once. The buildings of this series, as already stated, seemed to form one great construction under a common roof, rather than separate individual houses built by private persons. What was the material of the roofs of the apartments and suites in this series of constructions, —whether mud domes, or earth laid on mats and split palms, after the fashion of the present day, I cannot say positively.

It was evident that these constructions were occupied during a considerable period of time. Some pottery and terra-cotta figurines of Greek work (see plate facing page 128) show that a portion of that time, at least, was in the Seleucidan period, but there are no remains which enable us to fix positively a *terminus a quo* or a *terminus ad quem* for these buildings. In one room of this series, to the northeast of the ziggurat, was found an inscribed door-socket of Kurigalzu II. Unlike the diorite door-sockets which the Sargonids and the rulers of Ur brought from Sinai or Northern Arabia, he, a Cossæan, made use of marble or limestone from the Persian mountains. This door-socket was dug up during my absence at Tello in the first year, and the notes taken at that time do not show clearly whether it was or was not in place; but I fancy that the latter was the case. The bricks used in the construction of these rooms were strikingly similar to those used in the rooms of Cossæan construction on the mound line to the southeast of the great wall, but other evidence which will be adduced presently makes it almost certain that these rooms, walls, and corridors were built at a much later date, probably after 500 B.C. The outer casing of the ziggurat, the large blocks of mud brick, belonged to the same period as these rooms and corridors; and that they were part of one and the same re-construction was shown by the fact that the walls adjoining the ziggurat were dovetailed into this outer casing. The wing-shaped form was given to the ziggurat at this period.



Temple Hill looking east of south from the Ziggurat, toward the close of the second year. Great Trench to the left. To the right of that, the walls of houses of the last Reconstruction are visible.

The houses or rooms above described had their foundations about 5.5 metres below the surface, and rested on earth well packed together, about a metre in depth. This again rested upon a mass of rubble and débris containing no walls, but great quantities of bricks and fragments of bricks, some of them with green-glazed surfaces, and many bearing inscriptions of Ashurbanipal. Everywhere, on the northwest, the southwest, and the northeast, as well as in the great trench to the southeast of the ziggurat, we found evidence that there had been a very thorough demolition of some former structures containing large amounts of baked brick before that restoration of the temple was made which gave the ziggurat its cruciform shape, and surrounded it with the buildings of unbaked brick, described above.

Below this mass of earth and rubble, which may have been together about 1.25 metres in thickness, there had been to the southeast of the ziggurat, as late as Ashurbanipal's time, an open court paved in brick. Various fragments of pavements were found in different parts of this space. I found three pavements in an excavation which I conducted to the Sargon level in a room somewhat further to the northeast than the great trench; and Haynes reports three successive pavements within five feet in the same general locality. Apparently each of these pavements was once continuous over the whole section, but only fragments still remain here and there. Inscribed bricks found in some of these fragments of pavements show that one of them was the work of Ur-Ninib, King of Isin, who is supposed to have lived about 2600 B.C. In general, however, the bricks of which these pavements were composed were uninscribed. The line which is now marked by the inner wall on the plan and section seems to have been at the time of the existence of these pavements the southeastern boundary of the great court of the ziggurat; and the two conical solid towers in that wall appear to

have been in existence at that period. I think it not impossible that at that time these were columns of the same general significance as the Jachin and Boaz which stood before the Temple of Yahweh, at Jerusalem. Similar columns were erected in front of all Phœnician temples, and they appear also in ancient Arabian worship as an adjunct of the Temple. Dozy, in his *Israeliten zu Mekka*, says: "Among the idols of Mecca there were two stones, which were called Isaf and Naila. According to the representations of Arab writers, Isaf was a man and Naila a woman. Both belonged to the Gorhum and had committed folly in the temple. In punishment for this sin they were turned into stones. They were placed outside of the temple as a warning and a horrible example; but in later times the prince of the Chorza's, Amr-ibn-Lohei, commanded to honor them as gods, and men obeyed." Bent found in Mashonaland, in what seemed to be a Phœnician building, solid masonry columns, which, I fancy, had the same significance. The terrace proper at that time extended to the great wall, and the brick causeway by which to approach the temple came out at this point between the two columns, the wall between them marking an inner entrance. Later, when both walls were carried higher and turned into defenses, these towers were furnished with parapets.

What there was on the other side of the ziggurat in the days before the last reconstruction I am unable to say, excepting for the north, where there were several brick structures. I found still in position fragments of brickwork, noticeably an enormous old tower of partly circular form (38). This, which was only a foundation, but a very large and deep one, implying a tower of great size and height, rested on an older structure of unbaked brick. Within it was packed with rubble. At the last reconstruction it had been built about with unbaked brick so that, as I found it, it was encased in an enormous mass of

unbaked brick without, above, and below. Outside of this, and lower down the hill toward the plain, there was another brick wall enclosed in a somewhat similar way in later structures of mud brick.

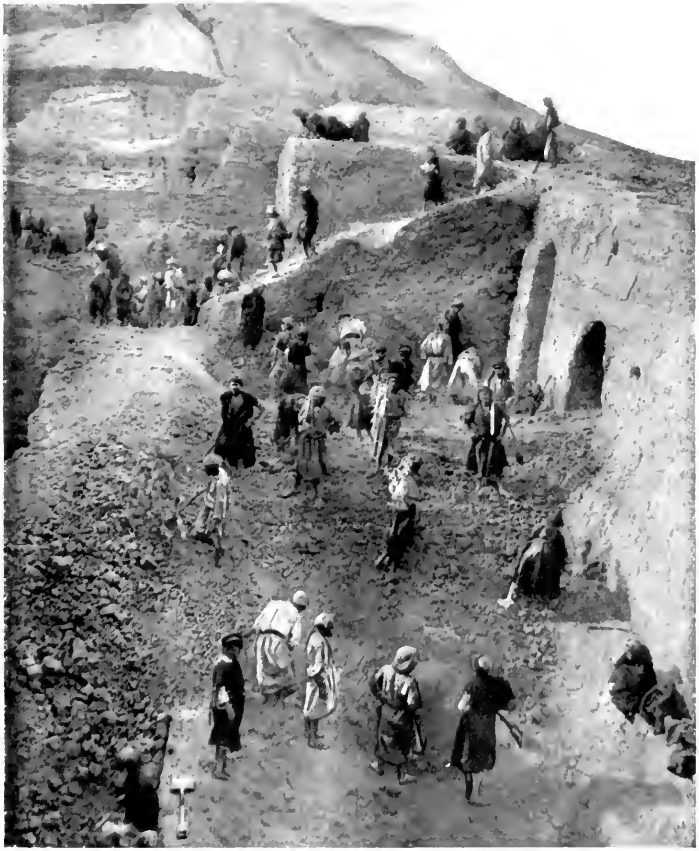
To return to the great trench (1); almost nine metres below the surface of the plateau we came upon a solid terrace of crude bricks of Ur-Gur, something over two metres in thickness. This constituted an enormous platform, or terrace, and was shown by excavations at various points to have extended beneath and on all sides of the ziggurat, which stood on its northeastern edge. The southeastern part of this terrace, as far as the towers, was originally in an open court. This court was flanked, at least on part of its northeastern side, by buildings, but its further dimensions we do not yet know, nor the character of the buildings which may have stood, in those days, at various points around the ziggurat. At various points above this terrace, toward the ziggurat and near Ur-Gur's causeway, we found a few very beautiful small clay tablets, belonging apparently to the second dynasty of Ur, 2500 B.C. Immediately below this terrace I found constructions of mud brick with door-sockets [1] of Sargon; while at the same level in another place Haynes found a terrace and pavement of bricks, bearing the stamps of both Naram-Sin and Sargon. I also found at this level a clay brick stamp of Sargon. Here were found also a number of vases, and vase fragments, chiefly in marble, of a new king, Alu-Sharshid, king of Kish, one of which reads: "Alu-sharshid, King of Kishatu, presented to Bel from the spoil of Elam, when he had subjugated Elam and Bara'se." More numerous fragments of vases of this king were found by me scattered over Ur-Gur's platform, and also in a hole or cellar sunk in that platform, under and by the side of

[1] The inscription on these ends with the curse: "Whosoever removes this inscribed stone, his foundation may Bel and Shamash and Ninna tear up, and exterminate his seed."

the second or inner temple wall, possibly originally intended as a safety vault for the deposit of the temple treasures. With these latter, in this cellar, were found the three large, unformed, marble blocks bearing the rude inscription of Lugal-kigub-nidudu, already referred to, and a small glass bottle. It looked as though someone had intentionally broken to pieces at this place a quantity of vases of earlier kings. Among the vase fragments found by me, partly here and partly below Ur-Gur's platform, in addition to those already mentioned, there were also inscriptions of kings of Erech, Sirpurla, or Lagash, and other places, of a date as early as 4000 B.C. In the case of one of these fragments it appeared that Bur-Sin of Ur, 2400 B.C., had taken an older vase dedicated to Ishtar by a king of Erech, and re-dedicated it to Bel of Nippur, in the same way in which he re-dedicated the diorite door-socket with the inscription of Lugal-kigub-nidudu.

The Sargon level was 11.5 to 12 metres below the surface. This was as deep as my excavations were conducted systematically throughout the trench, though, as stated, I reached the same level in a room to the northeast of this trench, and also at the southern inner corner of the great wall. At the latter place I found nothing which enabled me to date the strata; but conducting a tunnel under the great wall I found quantities of charred wood, indicating a conflagration. A tunnel was also carried through and under the great wall, at the southeastern end of trench 1, and here, as shown by the section, we descended almost five metres below plain level.

But while my excavations in trench 1 were in general carried down to Sargon level, 11.5 to 12 metres below the 14-metre level, toward the northeastern end of this trench I descended by a shaft to a depth of 14.50 metres. My notes on the strata found in this well show that 5.5 metres below the surface we reached the foundations of



Scene in Great Trench on Temple Hill in the latter part of the second year.

the walls of the buildings of the later reconstruction. Below this was formless débris to the depth of 8.40 metres. Here we found the mud-brick terrace of Ur-Gur, built of his characteristic small bricks. We reached the bottom of this terrace at 10.50 metres below the surface. At the depth of 13.20 metres we found an inscribed vase of Alu-Sharshid, King of Kish. At a depth of 12.95 metres[1] we found a large water-jar of the same type found in all strata late and early. Below this we found sherds and foundations of crude brick walls, but nothing by which date could be fixed.

More important, perhaps, than the results obtained by this trench were those obtained by the careful excavation of the ziggurat itself, designated in the inscriptions as Imgarsag, Mountain of Heaven, or Sagash, High Towering. By cuts and borings I ascertained that there was an older ziggurat within the cruciform construction. By means of tunnels, as indicated on the plan, I found the eastern and western corners of this, and touched it also at two other points, one on the southeastern side, and one on the northwestern corner. It was proved by my explorations that the ziggurat which formed the core of the existing structure was the work of Ur-Gur. Haynes, as already stated, afterwards explored this ziggurat of Ur-Gur more thoroughly, removing all the later work by which it was covered. Toward the northwestern edge of this solid platform of unbaked brick, Ur-Gur had erected a ziggurat in three stages. The lowest of these stages was about six metres in height, the sides sloping upward

[1] At about this position from the highest strata to the lowest we found water-jars. It was in this immediate neighborhood, in the strata of the rooms of the Seleucidan period, that we found the deposit of water-jars represented in the cut on page 154, empty, inverted, and standing one on top of another in three layers. And it was in this general locality, at or below the level of the altar and outside the "curb," that Haynes found the great water-jar with "rope pattern" (Hilprecht, *Old Babylonian Inscriptions*, vol. i., part ii., plate xxvii.).

at the rate of one in four. The second terrace set back about four metres from the surface of the one below it. The lower terrace was faced with burned brick on the southeastern side, looking toward the great open court. On all of the other sides there was a foundation of baked bricks, four courses high and eight thick, above which the material used was unbaked bricks covered with a plaster of fine clay mixed with chopped straw, which being often renewed, preserved the crude bricks beneath it as well as if they had been burned by fire.

In the middle of these three sides was a conduit for the purpose of carrying away water from the upper surface of the ziggurat. This was built of baked brick. There was apparently a similar arrangement for carrying off the water in the second and third stages, but it was ruined beyond possibility of restoration. Indeed, both of these stages were so ruined by water that it was difficult to trace or restore them. Around the base of the ziggurat on all sides was a plaster of bitumen, sloping outward from the ziggurat, with gutters to carry off the water. By this arrangement the apparently very perishable foundation of unburned brick was thoroughly protected from destruction; and unburned brick protected like this, at least in the climate of Babylonia, is one of the most imperishable materials that can be found. There were also little holes in among the bricks, for the purpose of receiving and carrying off the water which might drain through; and below and about the ziggurat at various points were drains of pottery rings.

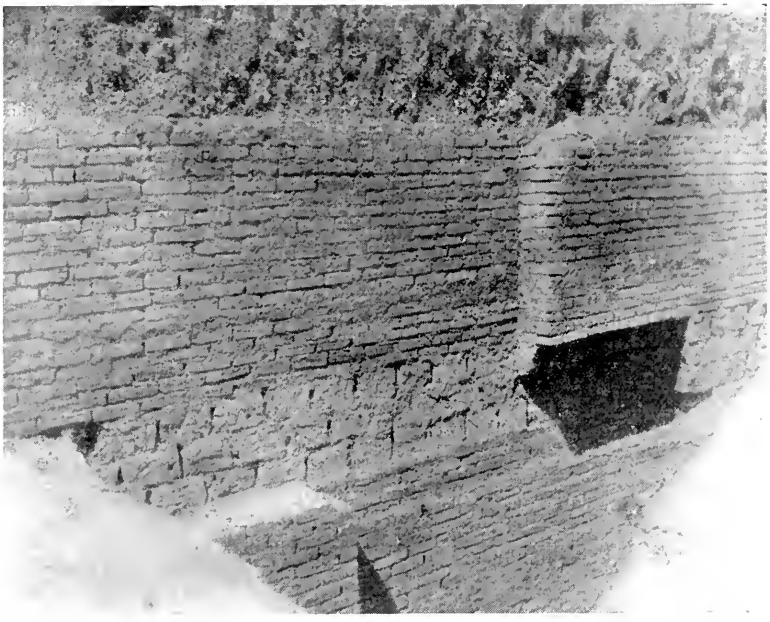
The first important change in the form of the ziggurat was made by Kadashman-Turgu, 1257–1241 B.C. He built around the ziggurat on three sides at the base a casing wall of brick sixteen courses in height, but preserved and utilized the conduits of Ur-Gur. The next great reconstruction was undertaken by Ashurbanipal. Upon the casing wall of Kadashman-Turgu, he erected,

at a slightly different angle and somewhat set back from its edge, a second wall. The conduits he built up with bricks, many of them stamped with his name, and the upper part of the lower terrace he faced on the north-eastern, northwestern, and southwestern sides with a panelled wall of brick, the same which is shown on the plan as exposed at the northern corner, giving to the structure quite a different appearance from that which it had hitherto possessed, and somewhat enlarging its dimensions; so that when left by him it measured fifty-five metres in length by thirty-five metres in breadth, or very little less than the ziggurat of the temple of Sin at Ur. His work is readily identified by the bricks bearing an eleven-line inscription, frequently on the edge instead of the flat surface, which reads: " To Bel, lord of lands, his lord, Ashur-ban-aplu, his favorite shepherd, powerful king, king of the four quarters of the earth, built E-kur, his beloved house, with bricks."

The reconstructions of Kadashman-Turgu and Ashurbanipal seem to indicate a filling up of the surface immediately about the ziggurat by the washing down of mud from above. This process continued until the greater part of the ziggurat was ultimately buried beneath the accumulations washed down from its own upper surfaces. When the wall of Ashurbanipal was almost buried there was built upon it a wall of unbaked brick, of which only three courses remain. The crude bricks of this wall are the characteristic bricks of the great reconstruction, which gave the ziggurat its cruciform shape, and which covered the ground about the ziggurat on all sides with the remains of the houses, corridors, and streets, shown in the plans. These bricks are large, almost square, of imposing appearance, but rather rough work—in many cases pieces of pottery being used to fasten the clay together in place of straw. The builder who erected this wall upon that of Ashurbanipal also added the wings or

projections on all sides of the ziggurat, and built over almost the entire ziggurat a new construction of unbaked brick, reducing at the same time the number of stages from three to two. Of the previous constructions of the ziggurat, after this builder's work was completed, there remained exposed only a portion of the wall of Ashurbanipal on the lower terrace, at the northern corner, and from that corner as far as the wings on the northeastern and northwestern sides. The rooms adjoining the ziggurat were dovetailed into the new structure as already stated, showing that they are part of one and the same work. At a later date a brick wall was built upon the remains of the wall of unbaked brick on the ziggurat. This wall is of a very late date and composed, not of bricks made for the purpose, but of bricks taken from other constructions; so that the names of a large number of kings are found upon the bricks in this wall. It seems probable that, at the time when this wall was built, the ground about the ziggurat had been so raised by the mud washed down from the surface, that it practically stood upon the surface itself. It seems to have been a retaining wall to prevent the further dissolution of the upper portions of the ziggurat enclosed by it. The accompanying plate exhibits below the panelled wall of Ashurbanipal made of baked brick, many of the bricks bearing his stamp. Immediately above this are seen three courses of crude brick of the later reconstruction, and above this still, the late wall of baked brick just described, an overhanging portion of which strengthens the suspicion that when erected it stood upon the surface.

I have thus rapidly surveyed the history of the ziggurat in its reconstructions; but it must be added that other kings did work upon both the ziggurat and the temple at large, besides those who were responsible for the great reconstructions. An examination of two of the corners of the ziggurat made by me, the northern and the west-



The Ziggurat on the northwestern side, near the northern corner. Below are visible the panelled walls of brick of Ashurbanipal. Above are seen the great blocks of unbaked brick of the last great Reconstruction. Above this are formless débris and very late walls.

ern, showed that at some time they had been removed almost down to the foundation, and afterwards built up again. The bricks of both Ur-Gur and Ashurbanipal were originally laid in bitumen, but the bricks in the corner of the wall were laid in mortar, only those of Ur-Gur and Ashurbanipal having bitumen adhering to them; thus giving evidence that these corners had been removed for some purpose, and then rebuilt. The walls themselves about the corner were clearly constructions of Ashurbanipal. It is evident, therefore, that this destruction and restoration of the corners, whether undertaken in the search for archive cylinders, or for whatever purpose it was undertaken, must have taken place at a later date than 626 B.C. Among the bricks of other kings found by me in the ziggurat were those of Bur-Sin of Isin, 2600 B.C., who calls himself "the powerful shepherd of Ur, the restorer of the oracle tree of Eridu, the lord who delivers the commands of Erech"; Ishme Dagan of Isin, about the same date; Kurigalzu II., a Cossæan king of Babylon, 1306–1284 B.C.; and Ramman-shum-usur, of the same Cossæan dynasty, 1201–1173 B.C. ("To Bel, lord of lands, his lord, Ramman-shum-usur, his favorite shepherd, adorner of Nippur, chief of E-kur, built E-kur, his beloved house, with bricks."); and among those found elsewhere in the temple were bricks of Ur-Ninib, King of Isin, "shepherd of Ur," and "deliverer of the commands of Eridu"; of Bur-Sin of Ur, and of Esarhaddon of Assyria (670 B.C.), showing that many kings of many ages had honored the temple of Bel at Nippur.

I have already stated that I pierced the ziggurat at its centre, and at No. 52 excavated beneath the level of Ur-Gur's foundations to the depth of two metres, finding there no remains of a preceding ziggurat, but first a metre of black ashes, and then a metre of earth. By means of a deep trench and a descending tunnel I reached near the western corner of the ziggurat, on the northwestern side,

a point some two metres below plain level. In this tunnel I found a pottery drain well with a platform of bricks at its mouth of peculiar form, flat on one side and convex on the other, with thumb grooves on the convex side; and a brick wall,[1] made of similar bricks, the mortar used in which was bitumen. At the very bottom of this trench, beneath the ziggurat, and two metres below plain level, we found lying in the earth a beautiful, highly polished jade axe-head, and an inscribed clay tablet, the oldest inscribed object, to judge from its position, found at Nippur; being at a lower level than any of the inscribed stone objects found either by me or by Haynes.

On the southeastern side of the ziggurat, after reaching the inner wall of the Ur-Gur ziggurat by means of a tunnel, I sank a well to the depth of .50 metres below plain level, and found beneath both the Ur-Gur and Sargon levels a massive construction of mud brick with a curious re-entrant angle, part of which construction lay beneath the ziggurat. All this made it plain that no ziggurat had existed on this spot before the time of Ur-Gur's construction. Mr. Haynes's excavations confirmed this result. Beneath the southeastern wing of the ziggurat, which he removed, and below the Sargon level, at the depth of forty feet, he reported an archaic curb of bricks, which seems to be the same wall found by me on the other side of the ziggurat. Within this curb, and apparently at a lower level, he found an altar of unbaked brick, some thirteen feet in length. It was beneath the curb that he found the arched drain of which so much has been writen, the oldest true arch yet discovered.

Outside of the outer wall of the temple to the northwestward, northeastward, and southwestward, I con-

[1] This seems to be identical with the "curb" found by Haynes in front of the altar to the southeast of the ziggurat. It has been plausibly suggested that this wall, or curb, marked the inner, sacred enclosure of the temple in the earliest times.

ducted excavations to find the foundations of that wall. At several places I reached a depth of five metres below plain level, and at one or two of six metres. In general, I seemed to find virgin soil at about the former depth, but everywhere at that low level the walls of mud and brick had been so ruined by the moisture that it was almost, if not quite, impossible to follow them. Indeed, it was not always quite clear when we had reached virgin soil.

Studying the strata and constructions revealed by these excavations, we find at the depth of 11.5 to 12 metres beneath the surface the remains of Sargon and Naram-Sin, absolutely determined by inscriptions found in place by both Haynes and myself. He found inscribed bricks. I found door-sockets, a clay tablet or two, and a brick clay stamp. Beneath this there are still some seven or eight metres of débris. In this, below the Sargon level, Haynes reported finding clay tablets. I found, as stated, an inscribed clay tablet or two at the Sargon level, and one four metres below that level, beneath the ziggurat. Both Haynes and I found fragments of walls and constructions of various sorts at all depths down to virgin earth, and pottery—the pottery and bricks being similar to those found in later strata, and indicating in general a civilization of the same character.

Resting immediately upon the stratum of Sargon and Naram-Sin, without anything intervening, are the constructions of Ur-Gur. Naram-Sin is ordinarily dated at 3750 B.C., and Ur-Gur at 2800 B.C., or thereabouts. For this supposed intervening period of nine hundred and fifty years there is, therefore, absolutely nothing to show. The stratum of Ur-Gur is very thick, on account of the brick terrace, which occupies a space of 2.10 metres. Above this is a stratum of about 1.66 metres in thickness, in which, in the portion excavated, we found, as traces of different ages, three different pavements of brick.

Immediately above this comes a mass of débris resulting from the demolition of structures of Ashurbanipal, 669-626 B.C. In the court to the southeast, under the rooms to the southwest and northwest, and under the corridors, we found this mass of rubble a foot or more in thickness. Elsewhere we found brick foundations, apparently of the same period, descending into the strata beneath to the depth of four and six metres. Resting upon this foot of rubble representing Ashurbanipal's constructions were 5.5 metres of foundations and structures of mud brick occupied—as the closing up of the doors shows—through three successive periods, in which, as is evidenced by the remains found within, is included at least a part of the Seleucidan period. Above these there is a metre of accumulation dating from 200 B.C., or thereabouts, onward.

We found in our excavations three periods of iconoclasm; the first occurring shortly after the time of Bur-Sin of Ur, in which the temple statuary, votive stone vases, and the like, dedicated by former kings, were destroyed; another, immediately following the Cossæan dynasty, in which the "jeweller's shop" was destroyed; and a third, in which some successor of Ashurbanipal utterly destroyed the latter's extensive brick structures.

Much of the history of the temple is still uncertain. It is only, after all, a fragment which has been excavated, and from that we can merely guess at the remainder. The upper surface belonging to the last reconstruction has been fairly well explored. The ziggurat has been thoroughly examined, and a considerable section of the large courtyard to the southeast of the ziggurat has been removed, but the lack of buildings at this point during a great portion of the period renders the succession of strata there somewhat uncertain. It is desirable to remove in a similar manner, stratum by stratum, some sections of the temple where there were buildings. I explored by wells and borings at several points, but borings or wells are too

small to enable us to determine satisfactorily the nature of the strata over so large and complex an area.

In a previous chapter I have spoken of the object and origin of the ziggurat. I have also called attention to the similarity existing in certain particulars between the temple of Bel at Nippur and the temple of Yahweh at Jerusalem. It seems to me that Jewish, Phœnician, and Syrian temples, as we find them described in the Bible and other ancient sources, are in origin similar to the ziggurat temple such as we have it at Nippur. The Holy of Holies corresponds to the mysterious shrine on the summit of the ziggurat; the Holy Place corresponds to the ziggurat proper; outside of this is the altar of burnt offerings; the face of the temple is towards the east or southeast; and the temple is so arranged that one ascends constantly; the most holy portion being the highest. I do not mean that the Jewish temple at all resembles in its outward appearance the temple of Bel at Nippur. It had been developed far beyond that stage. It had its origin, however, in similar ideas regarding the nature of the divinity and the place and manner in which he should be worshipped, and to understand thoroughly the meaning of the Jewish temple and the method of its worship, we must study precisely such a temple as E-kur, the house of En-Lil, the storm god, at Nippur, the oldest temple of which we have any record, and one which exercised a profound influence on the religious development of Assyria and Babylonia, and through them of the whole Semitic world.

NOTE.—I wish to acknowledge my indebtedness to Dr. Haynes's later explorations, as reported by Professor Hilprecht in the introduction to his *Old Babylonian Inscriptions*, vol. i., part ii. While I am not able to say definitely that the explanation of any one part of my work was due to his later discoveries, it is nevertheless clear to me that I should not have understood the bearings of much that I found, had it not been for the light thrown

on them by his later work. I was the discoverer of the ancient temple, but it is largely his work which has made my discoveries intelligible. I found within the curious four-winged ziggurat the ancient ziggurat of Ur-Gur, and I ascertained that it had been repaired or reconstructed by Kadashman-Turgu and Ashurbanipal; it was Haynes's part, following out my work, to remove the later constructions and lay bare the older ziggurat within, thus obtaining a more complete and detailed knowledge of the character of that ziggurat. I explored the ziggurat from top to bottom by a cut going in to the very centre; Haynes explored it on the outside, tracing all the surfaces. I found that there was no ziggurat beneath the ziggurat of Ur-Gur, but that that structure rested on the remains of buildings of another sort,—in other words, that the oldest ziggurat of the temple of Bel at Nippur, at least in that position, was built by Ur-Gur. Haynes confirmed this by his excavations, and made some notable discoveries beneath the ziggurat itself. I found the causeway by which access was had to the upper stages of the Ur-Gur ziggurat on its southeastern side, but I am not sure that I could have understood the bearings of my discovery, had it not been for the better preserved piece of the same causeway which was unearthed by Haynes under the southeastern buttress-like wing of the late ziggurat. I dug down to the structures of the Sargon level, and proved by borings that Sargon was not, as had been theretofore supposed, at the beginning of Babylonian history, but as it were in the middle,—there being eleven or twelve metres of débris above, and seven or eight below his level. I found inscriptions of earlier kings of Kish, Lagash, Ur, and Erech; and also inscribed clay tablets and fragments of tablets of Sargon's time, and even of a time much earlier than Sargon, going back almost, if not quite, to the period of the foundation of Nippur. Haynes, continuing excavations at the same point on the

lines laid down by me, and, at my suggestion, broadening and enlarging the great trench which I had commenced, has, by the greater size of his excavations obtained better evidence of the succession of strata; and, by the greater depth to which he carried the trench as a whole, has secured a very much larger amount of very ancient inscribed material, enabling assyriologists to reconstruct the pre-Sargonic history, to an extent impossible from the material procured by me.

I wish also to acknowledge my indebtedness to Professor Hilprecht, whose transcriptions of Babylonian proper names I have generally followed in this and other chapters, as well as his chronology. For the translations of inscriptions in this volume I am also in general indebted to him. It should be said of the transcription of proper names, such as Lugal-zaggisi, Lugal-kigub-nidudu, and not a few others, that they are at present merely tentative. The characters forming the words have such possible sounds, but we are not certain that these were the sounds actually used in these and many other proper names.

CHAPTER VI.

THE COURT OF COLUMNS.

Tombs with many Tenants—Supposed Necropolis—The Columns—Marks of Conflagration—Exploring a Palace—More Columns—A Jewish City—An Incantation Bowl—Ancient Statuary—Character of Mounds—Dating the Strata—Cossæan Archives—Lowest Level—Use and Date of Columns.

IN the first year of our excavations our camp was pitched on the highest point of the mounds on the northwestern side of the old canal-bed, at the point marked 24 metres on the plan of levels (see plan facing page), near figure I. on the general plan (see plan in Chapter VII). There was some delay in commencing excavations, as stated in a previous chapter, because, not having filed a topographical plan at the time of application for a firman, according to the law, it was agreed that after reaching Nippur we should not begin to excavate until such a plan had been prepared, and accepted by the Turkish government.

During the few days while the plan was in preparation, we were occupied in building our camp. For this purpose bricks were needed, and workmen were sent out to gather them wherever they could be found upon the surface of the ground. Some of the men engaged in this search found a brick structure just appearing above the earth in a gully beneath the camp eastward, and proceeded on their own responsibility to excavate the structure and remove the bricks. Some of the bricks which

[ounds of Nippur to the w[y]ear ; dotted lines show tunnels.

Plan of Levels of that portion of the Mounds of Nippur to the west of the Shatt-en-Nil, showing excavations of first two years. Black trenches belong to first year; line trenches, to second year; dotted lines show tunnels. Roman numerals indicate numbers of hills, Arabic numerals, height in metres above plain-level.

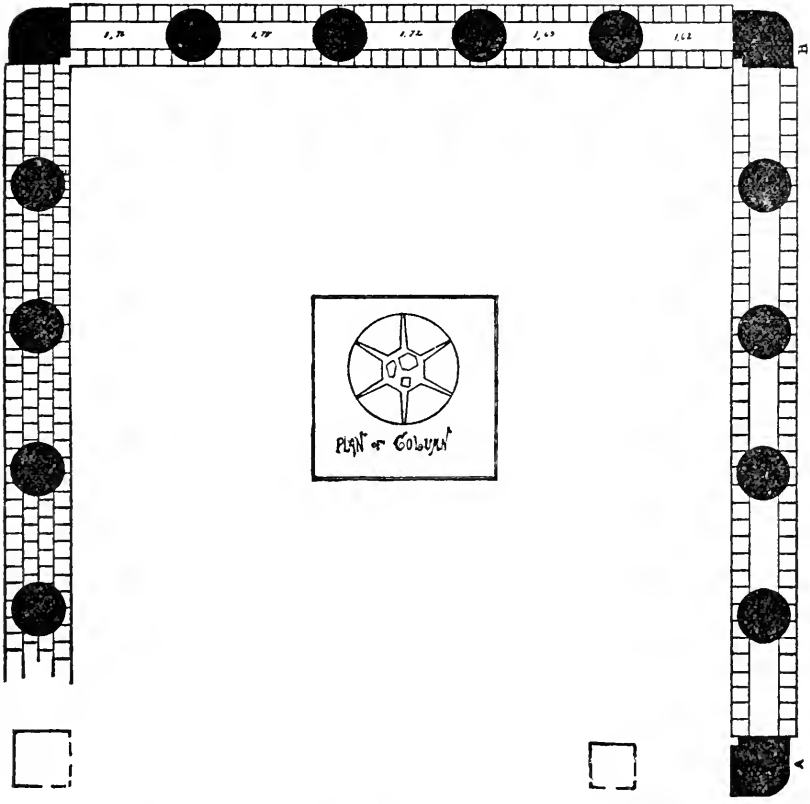
they brought in were inscribed. This led to an investigation of the source of supply, and induced us to commence excavations at the point where brickwork had been discovered containing inscribed bricks. This brickwork proved to be part of a tomb made of bricks taken from various structures, chiefly on the Temple Hill, prominent among which were bricks of Ur-Gur, Ishme-Dagan, and Ashurbanipal. In this tomb was found a slipper-shaped clay coffin, covered with a blue glass enamel, and decorated with figures representing a woman from the waist and upward, but terminating in arabesque below. This was broken into two pieces, which were lying separated and at an angle the one toward the other. There was a skeleton in the coffin, and outside of the coffin on the floor were bones indicating other burials. There were in the tomb, further, a green dish, a broken clay horse with rider (an indication of Parthian origin), a small stone meal-grinder, and a quantity of colored beads, chiefly glass. At one end were steps descending into the tomb, an arrangement which I do not remember to have seen in any other tomb. The peaked roof had fallen in and the tomb was full of earth.

Not far away we discovered a second tomb. This was built upon a fragment of a brick column, which formed part of the floor, the remainder being paved with a double row of bricks. The entrance was by a low door on the side. Here also the roof had fallen in and the interior was full of earth. In this tomb we found twelve bodies in all, some of which had been buried after the roof had fallen in. We found here also a yellowish, graceful, two-handled urn of delicate texture, decorated with two incised lines, and showing faint traces of black coloring, .15 metres in height. In the earth within this were traces of ashes and one metal bead. Below this there was a bowl of red pottery containing bones, and beneath this a smaller and less graceful two-handled green urn. There

were further in this tomb a broken green plate, a small green vase, three glass vials of rather pretty shape, about one hundred beads,—some pearl, some glass, and one overlaid with gold leaf—a copper bracelet, three copper rings, and one iron one, three shells, a whorl-shaped weight of unbaked clay, a plain square piece of copper, and thirteen copper coins and medals, almost hopelessly ruined, but two of them still identifiable as Sassanian. On the ruins of this tomb there were further three slipper-shaped coffins buried; two of them plain and one enamelled. All about both tombs were coffins—I had almost said countless coffins—of clay, side by side, in nests, one across another, two and even three bodies in one coffin. Sometimes jars had served as coffins. Indeed, the interments were in every conceivable fashion. Naturally we at first supposed that we had found the necropolis at Nippur, and the columnar construction which we unearthed at this point we imagined to have had some connection with the interment of the dead. But as our work proceeded it became manifest that, whatever might have led to the choice of this particular spot for so many interments, they had no direct connection with the intention of the building itself, every interment having taken place after the building had lain in ruins for a long period.

The building which we thus accidentally discovered, and which has not yet been completely explored, proved to be, next to the temple itself, the most interesting and ambitious structure excavated at Nippur up to date. The court of columns which we first laid bare was fifteen metres square. The floor consisted of a pavement of unbaked bricks of small size and good make, two to three metres in depth. Around this, on three sides, ran a sort of edging consisting of a double row of burned bricks, out of which rose four round brick columns resting on square bases, also of brick, descending about a metre beneath the surface. The southeastern or fourth side differed from

the other three sides only in the matter of the brick pavement between the columns, for on this side there were four rows of bricks instead of two, making a complete pavement. On the northeastern side, owing to the slope



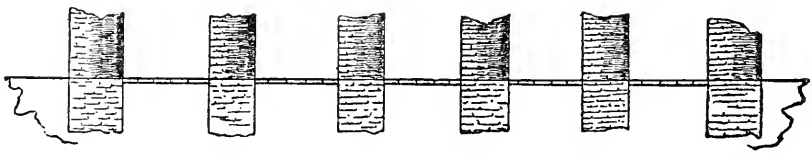
PLAN OF COURT OF COLUMNS, AS SURVEYED BY P. H. FIELD.

Scale, .008 M. = 1 M. Scale of Plan of Column, .016 M = 1 M.

of the hill in that direction, the brick pavement and the foundations of the columns were almost entirely washed away; nevertheless, from the little which remained, it seemed probable that this side was the same as the northwestern and southwestern sides, and I have ventured to

assume that such was the case. The corner columns were of a peculiar shape, partly rounded, partly square; as will be seen by a reference to the plan. The corners were twelve degrees off the cardinal points, as in the case of the Temple. In front of this court, on the southeast side, were the remains of a long narrow pavement, on which stood two columns of larger size, but everything else in this direction was ruined by water.

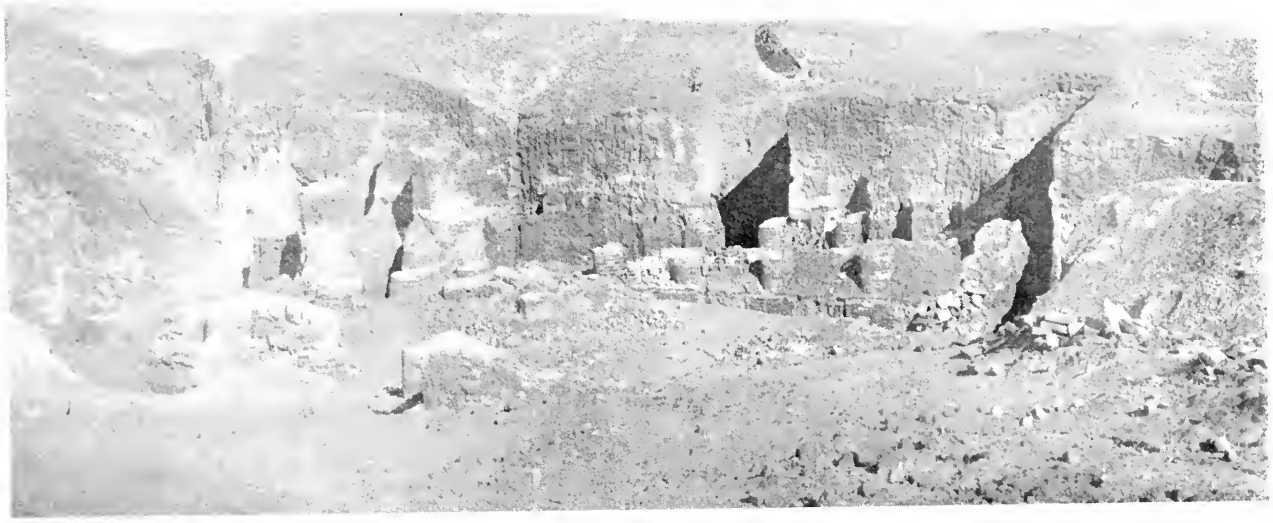
The columns of the court were almost exactly a metre in diameter at the base. They had been so broken up by later generations to obtain material for building that an entire column could not be restored. The portions of the columns which were still in place, to the height of a metre or thereabouts, were constant in diameter, but some



ELEVATION SHOWING FOUNDATIONS OF COLUMNS. FIELD.

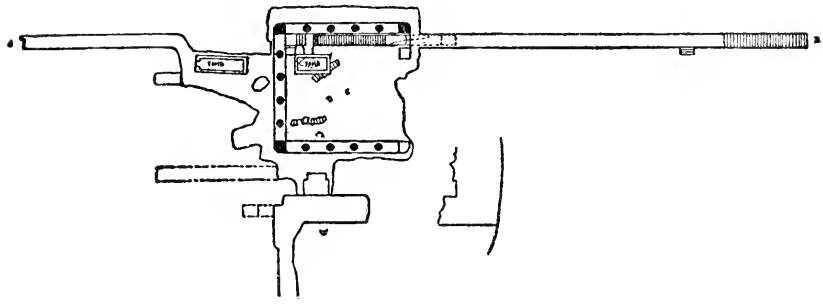
of the fragments which we found scattered here and there were of so much smaller size that Field, the architect of the expedition in the first year, was inclined to think at first that they belonged to other columns. It was finally shown, however, that these small pieces, the smallest not being more than about half a metre in diameter, were parts of the same columns. One fragment, somewhat larger than the rest, showed that the rate of diminution of diameter in the upper half of the columns was very rapid.

These columns were built of bricks especially made for the purpose. It will be observed from the plan that the six bricks of which the bulk of the column is composed form each a segment of a circle, with the apex truncated, so that they do not fit together in the centre, but leave a



Colonnade on Camp Hill, seen from the east ; showing Alcove on northwest side.

considerable space to be filled up by brick fragments of various sizes and shapes, no special bricks having been made for that purpose. The bricks of the columns were laid in mortar, not in bitumen. They were red, hard, and well baked, but somewhat brittle, tending to break up when the attempt was made to separate them from the mortar in which they were imbedded. After the columns were set up they were evidently dressed with some sharp instrument, for the purpose of cutting off projecting edges of bricks and mortar, and making the surface of the columns smooth and true.



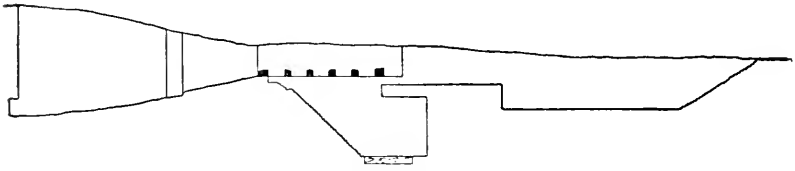
EXCAVATIONS ABOUT THE COURT OF COLUMNS THE FIRST YEAR, 1889. SHOWING TRENCH A B, BISECTING COURT OF COLUMNS.

Scale, 0.00125 M. = 1 M. FIELD.

It will be perceived by an examination of the plan that the columns are not at exactly even distances from one another. So on the southwestern side the distance between the western corner and the nearest column is 1.62 metres, while the distance between the southern corner and the next column is 1.76 metres. The other spaces on that side are 1.69 metres, 1.72 metres, and 1.75 metres respectively. Such irregularities are rather characteristic of the architecture at Nippur; and I suspect of Babylonian architecture in general.

It was evident from the line of ashes which ran along by and outside of the columns and the heaps of ashes at each corner that, while the court itself was probably open

to the heavens, palm beams had rested on the columns and supported the roof of a building about the court on all four sides. But at the outset the bearings of this evidence were somewhat confused, from the fact that after the destruction of the building its site was appropriated for burial purposes, and we were for a time inclined to suppose that part of the wood-remains which we found in and about the colonnade were connected with the burials which had taken place there. Our excavations in the second year gave final evidence that this was not the case, but that the remains of burning were all to be attributed to the structure of which the court of columns formed a



Elevation of Trench A B, shown in last cut, bisecting Court of Columns, near edge of same ; showing depth of excavations beneath the Court of Columns ; also continuation and level of trench to both sides of same, at end of first year, 1889. FIELD.

part; for in the second year we were able to show that this court was part of a very much larger structure, which was destroyed by fire.

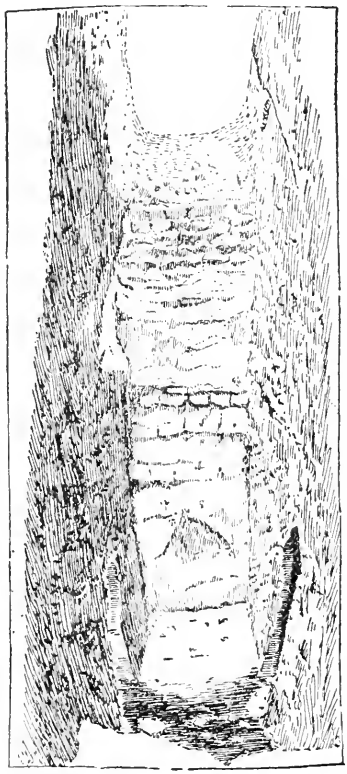
During the first year our trenches about the court had cut through a number of walls of mud brick, which were so disintegrated and ruined by fire that, with our lack of experience and the lack of experience of our men in detecting matters of this sort, we were unaware that we were cutting through walls. The accompanying plan will show so much of the building as we were able to excavate in the second year. To the northwest of the original court of columns we found an alcove (D in the plan), which had evidently been roofed in, the roof being supported upon two rectangular oblong columns and two oval

columns of brick, the axes of which were 1.20 metres and .60 metres. These columns rested on a platform of three rows of bricks, beneath which was a metre of mud brick. As will be observed, this portico was not exactly in the middle. Nothing ever was exactly in the middle at Nippur.

The court had been surrounded by a building on all sides, excepting possibly the southeast—the walls of this building being of unbaked brick in large blocks. The wall bounding the court to the northeast (P) was so destroyed by water, owing to the descent of the gully in this direction, that it could be traced only over a portion of its extent. On the southwest two passages opened out from the court, one of these giving entrance to a room (R), from which again another door opened into a long corridor (O). This corridor was explored by a trench begun in the first year and continued in the second year, leading under the highest part of the hill, and reaching finally a depth of over thirteen metres. This was a peculiarly difficult portion of the mounds to explore, since although the trenches were purposely made of unusual breadth, they constantly showed a tendency to cave in; and although we were fortunate enough to have no accidents, nevertheless more than once we found our trench filled up and the work of several weeks destroyed. Such a cave-in occurred toward the end of the second year of our excavations; and as at that time we were also exploring the temple, and much work remained to be done there, I abandoned the further investigation of this building on Camp Hill in order to concentrate all of my force on the Temple Hill. Haynes had a somewhat similar experience in the first year of his work, and as his force was small and the amount still to be done on the Temple Hill very great, he abandoned the exploration of this building after a few weeks' work, in which he had done little more than clear out the débris from some of my former trenches, and

concentrated his work upon the Temple Hill and the hill marked X in the plan of levels, in which we made our greatest discoveries of tablets.

In the centre of the Camp Hill, under the 24-metre level, the amount of superincumbent earth was so great that I conducted excavations along the walls of the building largely by tunnels, as will be seen from the plan. There was on what seemed to be the extreme southwestern side of the building a very large fine wall (MM), built of the large blocks of mud-brick spoken of above, burned red for the most part by the conflagration in which the building was destroyed. This, which I judged to be the outer wall of the building, from its position, size, and lack of doors, I traced, chiefly by tunnels, for the distance of fifty metres, finding a corner to the west, but none to the south, where the wall crossed a deep gully and was struck again on the next mound beyond.



GREAT TRENCH AT CAMP HILL, LOOKING WEST, SHOWING WALL, MM, SECOND YEAR.

Another passageway opening from the main court at S was closed by a door having a brick threshold and a stone door-socket. At the other end of this corridor there had been a similar door and door-socket.

Charred beams of palm wood in this corridor showed the construction of the roof. Heaps of ashes, with pieces of tamarisk on the brick threshold, were the remains of doors and door-posts. The small chamber marked I, into which this corridor gave access, had apparently served as a granary, and was full of burned barley. It should be added that in the long corridor, O, we found at the point marked by the letter O another deposit of burned barley, as well as the remains of burned palm logs from the roof.

From the chamber I a passage-way opened into a large room (E), which was divided into two parts by columns different from those in the large court, or in the smaller portico opening from it on the northwest. There were two columns built in the wall, in the manner indicated in the plan, and two round columns set upon square bases, each of the bases consisting of four courses of bricks and resting on mud-brick foundations. The circumference of these round columns was 3.95 metres. Between the columns, from one side to the other, ran a low brick wall about as high as the top of the bases; the top of which, I suppose, marked the floor level of this room, so that, as in the court of columns, the square bases of the round columns were originally below the floor surface. This room was on the edge of a gully, toward the southeast, and was entirely washed away from the point where the lines stop.

The round brick construction marked H, in the series of rooms and corridors opening out of the court to the southwest, was a well, or more probably a water-cooler.[1]

It will be seen on looking at the plan that at the southeast of the court first discovered there was a long low platform (TT), but no wall, as upon the other side. On this platform, which consisted of three courses of burned bricks resting on a substructure of mud-brick, stood, as already stated, two columns of much larger size than any found

[1] To this day similar constructions are used at Nejef and elsewhere in Irak as water-coolers.

elsewhere. The base of one of these columns was in place, as indicated at F. Traces of a second base I thought that I discovered at U. Remains of two round columns were found strewn here and there in the earth, from which it was clear that the diameter of the columns at the base must have been two metres; or more than double that of the columns of the court. This platform lay under a narrow mound separating the gully in which we found the court of columns from a much deeper gully to the southeast. Near one of these columns was a fragment of a wall of unburned brick with some courses of burned brick upon it, but what it meant or where it led to I do not know, since everything beyond this point was washed away, and it was impossible to obtain any clue for a reconstruction of the building on this side. The form of the platform, however, and the position and size of the two columns, suggest a gateway and an entrance to the court. Whether the entrance was from another court of the building, or from the outside, it was impossible to determine.

Toward the northwest and the southwest the difficulties that met us were quite the opposite of those with which we had to contend at the northeast and southeast—namely, the fact of the rapid rise of the hill on those sides, and the immense mass of earth under which everything was buried. The whole surface of the hill to the northwest and southwest was covered with a Jewish settlement, the houses of which were built of mud-brick, and in almost every house we found one, or more, Jewish incantation bowls. A translation of one of these bowls, kindly furnished me by Prof. Gottheil, of Columbia University, reads as follows:

"A remedy from heaven for Darbah, son of Asasarieh, and for Shadkoi daughter of Dada his wife, for their sons and daughters, their houses and possessions; that they may have children, and that these live and be preserved from Shedim and Dævas, from Shubhte and Satans, from

curses, night-demons and destruction which may have been prepared for them. I adjure you, O angel who has come down from heaven, whose horn is welted in blood . . . O angel; who hath command in the East over the secrets of the Almighty . . . may these live and be preserved from this day on. May the spells (of the evil spirits) never be seen hovering over his food; but may they remain in their own place, biting at the chain . . .

"May be banned and excommunicated all Kisi, woundings, trouble, cursing, laceration, calamity, ban, curse; all Shedim, Dævas, Shubhte, Lilith, Spirits—all destruction and anything else of evil—that they depart from out of Darbah son of Asasarieh, from Shadkoi daughter of Dada his wife; from Honik, from Yasmon, Ku Kithi, Mahduch, Abraham, Panui, Shiluch (?), Shadkoi, from their houses and possessions, and from everything which may be theirs. By means of this we loosen their hold from this day and forever. In the name of Yahweh of Hosts! Amen! Amen! Selah! May Yahweh, by this, preserve him from every Ashmodai of his soul!"

In one of these houses on the hill to the southwest we found a curious pottery object, which we supposed to have belonged to a Jewish doctor or apothecary, and to have been intended rather for ornament or advertisement than for use. We concluded that it belonged to an apothecary or doctor, from the fact that there were in the same place several clay bottles sealed with bitumen, containing a mixture which we judged to be intended as medicine, although no chemical analysis has yet been made. Our conclusions may therefore be faulty on this point, but the discovery of Jewish bowls in the same house seems to settle the fact that it belonged to the Jewish colony.

Kufic coins found in some of the houses of this settlement indicated that it was in existence as late as the seventh century A.D. This Jewish town extended over a large part of the mounds to the southwest of the canal,

from Camp Hill (marked I on the plan of levels) to X, and is everywhere identifiable by the incantation bowls found in the houses, some of which are written in Syriac or even Arabic, although by far the larger part are in Jewish script. In one of the houses on I, close to the colonnade, was found a curious fragment, twenty-one centimetres in height, of a statue in black dioritic stone. On one face, the obverse, was a ram in relief, held behind by a hand with very slender, long fingers. The hand was relatively much larger than the ram, the middle fingers measuring .042 metres, while the height of the ram over its hindquarters is only .11 metres. On the edge of the fragment, in front of the ram, the breast and some of the drapery of a human figure can be seen. This is relatively smaller than the ram, and much smaller than the hand. On the reverse is the small of a human back, undraped, and corresponding in size rather to the hand than to either the breast or the ram. I suppose that this was found or dug up by the occupant of the house, somewhere, probably, on the temple hill, which was at that time unoccupied, or sparsely occupied, and seems to have served to some extent as a brick quarry for the later inhabitants of other parts of the mounds.

At the time of the Jewish occupation of the mounds the surface was already very uneven. The Jewish settlement occupied in general the higher portions of the surface of the mounds, which were thus still further increased in height, while the gullies were left unoccupied. Such partial settlements of the mounds outside of the temple hill, which is more uniform in its strata, and the consequent unevenness of stratification, have rendered the task of determining the dates of buildings and objects found at Nippur one of great difficulty. In one of the gullies on the northeast side of X (indicated by the letter E on the plan of levels) was found a series of rooms of unburned brick belonging to a building destroyed by fire, in which

were stored tablets of a very ancient period, several of them bearing the seal of Gimil-Sin, of Ur, circa 2500 B.C. At the point marked F on the same mound was found a room used for the storage of unbaked tablets of the same period. These had been arranged on wooden shelves running around the walls, which, when the building was destroyed, fell to the ground with their precious freight. A brick well at this point was choked with earth, which was excavated down to the water level, recovering some hundreds of tablet fragments of the same period, which had fallen or been thrown into it. At C, at a somewhat higher level, we found a fine deposit of tablets of the Cossæan period, circa 1300 B.C. At H, Haynes found remains of the Sargon period (3800 B.C.), almost at the surface. In the same mounds, and often at but a slightly higher level, only on the summits instead of in the valleys, are found the houses of the Jewish town. These houses are in all cases of unburned brick, and resemble, or, in fact, seem to be identical with the houses of ordinary town Arabs of the present day in Hillah, Shatra, Diwanieh, and similar towns in that region. Not only do we find that the houses of the present day in neighboring towns are identical in structure with those built by the Jews at Nippur about 700 A.D., but the ordinary structures of the earlier periods back to the time of Sargon are of the same type and material; and it is only in exceptional cases that the shape of bricks or details of architecture give any clue to date. A similar homogeneity exists in the pottery and household utensils found in the houses and graves. Naturally, as a consequence of long experience, we are finding marks of date in objects which at first seemed undateable, and doubtless, in course of time, as a result of systematic and patient work, we shall be able to assign periods to much of the pottery, bricks, and the like, and ultimately to determine the period of objects found, even where they are not accompanied by

inscriptions. At present, however, we are compelled to rely largely upon inscriptions for chronological purposes.

I have already stated that the discovery of Kufic coins of the first caliphs in some of the Jewish houses on Camp Hill suggested the date of the seventh century A.D. for the Jewish town on the mounds of Nippur. In another place not far away the houses with Kufic coins were built over the ruins of those containing Jewish bowls, showing that the Jewish era also antedated the Kufic. In the house in which the curious piece of composite pottery mentioned above was found Jewish bowls and Parthian coins occurred together. We can thus carry the Jewish occupation of that part of the mounds about and above the building containing the court of columns back to the beginning of the Christian era or a little earlier, and find that there was a considerable Jewish settlement at Nippur during a period of six hundred years or more.

But at the same time that a part of the hill was occupied by a Jewish town, burials were taking place in other parts, and especially over and about the court of columns; so that, as I have already stated, we at first mistook this portion of the mounds for the necropolis of Nippur. These graves were so confused in time that it is impossible to talk of strata. One and the same tomb contains burials of different periods. Coins and seals found here show that these burials occurred in the Sassanian, Parthian, and apparently also in the Persian and Babylonian periods. Out of this confusion it was impossible to obtain any clue to the date of the columnar structure, which I supposed for a long time to be a building of late date—not earlier in any event than the Persian period, and probably influenced in the use of columns by Greek art. It was the connection of the court of columns with the huge, ramifying structure lying under the central mass of the hill which gave me the means of dating the colonnade, by a cut through the highest part of the

hill—the part which had the most and the best preserved strata.

As shown by the plan of levels and plan of building, a broad trench was carried directly through the highest part of mound I, which had been occupied by our camp in the first year. At the point C, between the 14- and the 16-metre level, the houses which we found at the surface—the lines of which were actually visible without excavation—were above the Jewish settlement; but at the summit of the mound, at the 24-metre level, this proved not to be the case. We excavated first a series of rooms, several of which were plastered and white-washed. The floors of these rooms were about three metres below the surface. The discovery of incantation bowls, one of them written in Syriac characters, in several of the rooms of this series, together with Kufic coins, settled quite satisfactorily the date of this stratum, as about 700 A.D. Below this we found Jewish bowls and Sassanian and Parthian coins. At a depth of five or six metres below the surface we came across a second series of buildings, above and in which were a number of burials in clay slipper-shaped coffins. These burials had evidently taken place after the houses in the second stratum had fallen into decay. There was nothing in these coffins, or in the houses beneath them, to determine date.

Below this we found no buildings and no proper strata, but only a few objects of various sorts loose in the earth. At ten metres below the surface I felt confident that we were in the Babylonian period, but we did not obtain any objects by means of which date could be proved beyond question until we reached a depth of eleven metres, at which depth we were on the level of the court of columns. Here we discovered quite close to the great wall MM, but on the outside of it, in a small tunnel run out from the wide trench, a curious set of pottery stored in a large urn. There were three small boxes, the largest ten centimetres

square, two of them with covers, and three small vases; all quite peculiar in pattern, colored green and yellow in stripes. The largest box was ornamented with knobs. Along with these were more than a hundred small disks and crescents, mostly in black and white, pierced for purposes of suspension. This pottery did not seem to be connected with a burial, nor were there any contents in the boxes or vases excepting the earth which had fallen into them. There were no traces of house-walls at this point.

While I was still uncertain as to the date of this pottery, or, in fact, of anything about this perplexing hill, in a small tunnel from the great trench on the opposite or southeastern side, at the depth of 11.20 metres, we discovered two hundred and forty-five baked tablets, practically entire. These lay together in the earth, and the clay about them showed marks of burning. There was no trace of a wall immediately about them. Further excavation added about fifty-three tablets found in the adjoining earth, together with a very large number of fragments; all found within a radius of a few feet, and apparently loose in the earth. Scarcely had we made this discovery, however, and secured the tablets, when the trench caved in, and we were unable to remove the superincumbent earth and reach our old level again that year.

In the first year of his work, Haynes undertook a further excavation of this site, and had the good fortune to discover in the same locality a large number of tablets of the same type. I am unable to identify the precise spot at which he discovered his tablets. Mine were discovered at the spot marked B, on hill I, at which point, it will be observed, a tunnel is indicated in the great trench. On examination, these tablets proved to be, without exception, records of the Cossæan dynasty. The large tablet represented in the accompanying photograph bears the name of Nazi-Marruttash, and is a record of

temple income, as are all the other tablets of this find. They are archives of the Cossæan dynasty, dealing with the receipts of the great temple of Bel. The date of Nazi-Marruttash is 1284 to 1258 B.C.

It will be observed that these tablets were not actually found in the large building containing the court of columns, but, as I think will have been made clear by my account of the excavations, they enable us to date approximately the stratum to which that building belongs. It was in existence at the time of the supremacy of the Cossæan dynasty, and, inasmuch as we have found in the temple excavations that some of the kings of that dynasty, like Kurigalzu II. (1306–1284) and Kadashman-Turgu (1258–1241), son of Nazi-Marruttash, were great builders, we may not unfairly presume that this building was erected by the kings of that dynasty somewhere, let us say, between 1450 and 1250 B.C.

The endeavor to secure dates on the other side, that is, before the erection of the building, by excavating beneath it, was not rewarded with success. The great trench through the centre of the hill was carried to the depth of thirteen metres at the point where it strikes the great wall MM on the southeastern side of that wall. At this depth we found other walls of unbaked brick belonging to buildings of an earlier era, and followed them for a little distance with tunnels, but without result. A long trench was projected across the entire hill to give us a section of the same, as will be seen by Field's plan. Beneath the court of columns this latter trench descended to the depth of thirteen metres, at which point we were exactly twenty-four metres below the 24-metre level, but nothing was discovered which could throw any light on the question of dates. Here and there we found pottery and household utensils, but always of the same common character which might have belonged to any period from Sargon down to the present time. At the depth of thir-

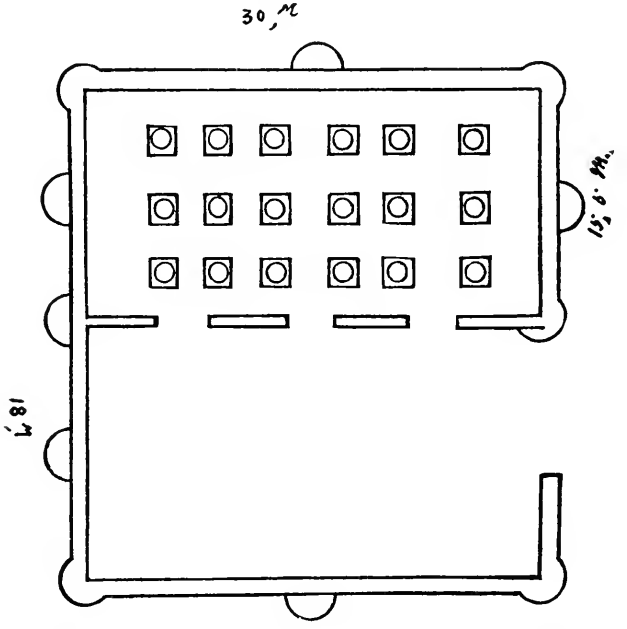
teen metres we came upon a wall of unbaked brick (shown at bottom of trench in cut on page 178) equally lacking in characteristic features, and at this point we were obliged to abandon the shaft for fear of a cave-in.

I have given in some detail the plans of this building, as far as excavated, and an account of the excavations, because a peculiar interest attaches to the use of the round column. Columns of a different form, and very much more elaborate in some particulars, were found by M. de Sarzec, at Tello. I had the good fortune to discover at Abu-Adham, a few hours' distance from Tello, on the other side of the Shatt-el-Haï, a building with brick columns, precisely like those found in the court of columns at Nippur. Abu-Adham is one of a very remarkable group of mounds, lying, unfortunately, in the midst of sandhills, between Hammam and Umm-el-Ajarib, a little to the northward of the direct line between these two places.

The most important mounds of this group are those of Yokha, or more properly Jokha, which evidently represent a large and important city. These are extensive, but low lying, like those of Tello. Stone fragments are numerous, and one can pick up on the surface quantities of pieces of vases and other similar objects of stone of various sorts extremely well wrought. Such objects, as far as my experience goes, are an evidence of an antiquity antedating 2000 B.C., and their appearance on the surface is an indication that these mounds were, comparatively, at least, unoccupied during the succeeding ages. Bricks found in a structure at the surface of the mounds were of decidedly archaic appearance, flat on one side and convex on the other, with thumb grooves in the convex surface, like those found beneath the ziggurat at Nippur in the pre-Sargonic stratum. Loftus, while exploring in this neighborhood, found at Yokha a small stone statue of the Tello school of art, dating from 3000 B.C. (*Travels and Re-*

searches in Chaldæa and Susiana, p. 116, note.) The University of Pennsylvania possesses a door-socket from Yokha of about 2600 B.C., and tablets of approximately the same date.

About a quarter of an hour from Yokha, to the southwest, lies a small mound called Ferwa, the surface remains on which are of the same general character as those on



PLAN OF BRICK BUILDING WITH COLUMNS, AT ABU-ADHAM.

Yokha. Beyond this again are two smaller mounds, belonging apparently to the same period, on one of which, Abu-Adham, I found the building mentioned above, containing a court of columns of a still more interesting type architecturally than those found at Nippur, reminding one somewhat of Solomon's porch of columns, described in the second book of Kings. There were visible two rooms, the larger 30 x 18 metres, and the smaller, or inner

room, 30 x 15.5 metres, the walls of which without were relieved by half columns in brick. In the inner room were eighteen round columns of brick, each about a metre in diameter, set upon square bases, each side of which measured 1.5 metres. (I am not sure that the two centre columns were not missing.) These columns were similar in construction to those at Nippur. From the evidence of the surrounding mounds, I should judge that this building belonged to the middle of the third millenium B.C.

Abu-Adham, as already indicated, lies in the sphere of influence of Tello. Less than an hour away toward the Shatt-el-Haï, on the direct road to Tello, lies the burial mound or necropolis of Umm-el-Ajarib. On this latter mound de Sarzec found a head of a type similar to those found at Tello. My men found at the same place a small marble statue of the Tello type, much defaced. At Hammam, also, two hours or so from Yokha, toward the northeast, Loftus found a badly broken and battered statue of Gudea. I suspect that this had been brought originally from Yokha or Umm-el-Ajarib, but it is at least an evidence of the general period of the ruins of that section.

It is worthy of notice, moreover, that Yokha, Ferwa, and Abu-Adham lie on the course of the ancient Shatt-en-Nil, which emptied into the Euphrates by Warka, or Erech, some three or four hours lower down; and that in the mound called Wuswas, at this latter city, Loftus found half columns of brick, seven shafts together, used to relieve a façade. He places the date of the building in which these half columns were found at not later than 1500 B.C. The use of columns and half columns of brick would seem to have been by no means uncommon in southern Babylonia, wherever, at least, the influence of the artists of Tello was felt, from the middle of the third millenium or earlier until about the thirteenth century B.C.

CHAPTER VII.

TRENCH BY TRENCH.

Camp Hill—First Tablet Find—Temple Hill—Trial Trenches—More Tablets—Buried Records—Illicit Digging—Dating the Strata—Babylonian Houses—Contemporary with Abraham—City of the Living—Pottery Furnaces—Looking for a Gate—Assyrian Remains—A Child's Grave—The Canal Bed—A Burned Town—A Hall of Records—The City Wall.

IN the previous chapters I have described at some length the excavations at two points, the Camp Hill and the Temple Hill, where important buildings were discovered and partly excavated. I will now ask the reader to follow me rapidly over the various trenches in other parts of the mounds by means of the general view of the mounds (Plate facing page 194), and the plan of levels of the southwestern half of the mounds (Plate facing page 172). At the close of the first year's work Field had prepared in Paris by M. Muret from his plans and drawings two plaster casts representing the mounds as they appeared at the close of the first year's work. One of these is now in the University Museum in Philadelphia, and one in the Imperial Museum at Constantinople. These casts give an admirable idea of the mounds as a whole, and are generally accurate, with one important exception. The eastern corner of the temple has been crowded forty metres to the westward of its proper position, quite changing the appearance of the entire eastern portion of that hill. In consequence of this error hill VII

has likewise been moved too far westward. In spite of this fault I have used this photograph, because no plans and no drawings give so good a general idea of the mounds.

Our camp the first year was situated on hill I at the point marked with the I. This was almost if not quite as high as Bint-el-Amir. Both of them are marked as twenty-four metres above plain level on Field's plan of levels, which is six metres higher than the next highest point, IX. The hills are numbered in the order in which we commenced to excavate them. Our first trench, as already stated, was started on the Camp Hill, to the eastward of the camp in a gully, and the square excavation (A on plan of levels) shown there is the court of columns described in the last chapter. The H like excavation to the north of this (G on the plan of levels) was a Jewish house, the first which we excavated. As we walked over the place we noticed, in the early morning, whitish lines showing through the darker earth about them. These whitish lines, half a metre to a metre broad, formed room-like enclosures. Excavating, we found that they were above the walls of rooms. Later we became familiar with this phenomenon of the walls of rooms showing through the ground in the early morning as lighter colored and drier earth. Our excavations on this hill were very extensive in the second year, as will be seen by a glance at the plan, and in addition to the work on the Cossæan palace and its surroundings, trial trenches of greater or less extent were run at a number of other points with a view to ascertaining, so far as possible, the general character of the hill. On the higher levels we found everywhere Jewish houses, readily identifiable by the incantation bowls. These often contained other articles of domestic use, chiefly pottery, spinning weights, millstones, and pebbles used as pestles, sharpening stones, and the like. It was at D that the apothe-

NIPPUR.—Taken from a cast of the mounds, showing excavations of first year. The Temple Hill is [illegible] Roman numbers indicate [illegible] made. Arabic numerals show the height of the mound in metres [illegible] plain-level.

cary's shop was found. In the lower levels we found at one place a few stray tablets of the late Babylonian period, and at another an inscribed lapis lazuli disk of one of the Cossæan kings. Nowhere did we find traces of any building of importance; and everywhere we found coffins, burial jars, and pottery drains.

The second point at which we commenced excavations was a small hill at the northwestern entrance of the canal into the city, at the point where, judging from appearances, the wall line of the city crossed the canal. This mound (II on plan) rose only four metres above plain level, and was so small that we thought we could explore it with little trouble. Moreover, from its position we judged that it had been connected with the control of the canal, and might prove interesting. Commencing at about plain level, we ran in three small trenches, two of which met, forming a cut through the mound from one side to the other. We found no construction of any sort, but only a mass of débris. In this, along with a few other objects, we found a clay tablet, undated, containing a list of animals given, or to be given, for some purpose to the temple, apparently, and an illegible fragment of another tablet. These were our first tablet finds, and greatly aroused our expectations. We could make nothing of the hill, however, and abandoned it after a few days, as soon as our narrow cut was completed. We did not understand work of this sort at that time, and our treatment of this hill was not satisfactory.

The third place at which we commenced excavations was the Temple Hill (III on plan). This we identified correctly from its general appearance on the outside, but our excavations the first year were relatively small and extremely disappointing. The important work on this hill was done by me in the second year, as already related, and later by Haynes in the second expedition. We did, however, trace the great outer southeastern wall as far as

the buttresses the first year, and the general outline of the cruciform ziggurat. It was not clear to us at first where the Temple ended toward the southwest, and we supposed that the hill marked III. A was included in its precincts. This proved not to be the case, and the results of our excavations at this point were not, therefore, included in the last chapter. We found here a series of rooms and a long corridor built of large blocks of unbaked brick, resting on a low terrace of earth and rubble, a couple of metres above plain level. But what the object of the structure was, or its relation to the Temple, with which it seemed to be connected, we could not determine. There were some coffins of the Parthian and Sassanian periods found here, but they had evidently been interred after the building had become a ruin-heap. There was nothing by which we could certainly fix the age of these structures, but there were certain points of resemblance with the Cossæan constructions in front of the great Temple wall to the southeast.

Not many days after our arrival at Nippur one of our men found near the bottom of the next hill nose, jutting out into the canal to the southeast of our camp, a couple of stone fragments with old Babylonian characters inscribed upon them. In hope of finding more material of this sort, we ran two small trial trenches into that hill (IV) at low levels, four and six metres above the plain, respectively. We found a couple of terra-cotta figurines of Ishtar of a common type, a few ordinary pieces of pottery and a copper implement; but no inscribed objects. We found also some house walls of mud-brick, and a pottery drain in such an excellent state of preservation that we could sound it with a plummet to the depth of 13.40 metres. As a result of commencing our excavations at a low level in a gully where the water had washed off the upper strata, we had evidently struck at the outset in these structures fairly early Babylonian remains; but as

we found nothing of any consequence we abandoned the place after a very few days to put the men on V, where we had begun to make interesting discoveries.

Hill V was one of the most satisfactory hills at which we worked, and the only one from which, during the first year, we took any antiquities of value. It was an almost triangular hill at the southeastern end of the mounds, opposite the temple, and at its highest point, which was toward the northern nose, fourteen metres above plain level, or the same height as the great outer wall of the temple. The very first trial trenches which we ran in the northwestern nose of this hill were a success. In one of them we found a few fragments of inscribed tablets, an Ishtar figurine of clay, a small clay elephant, a three-legged terra-cotta table of toy size, several drinking vessels, an enormous phallus, and various pieces of pottery. In the other trench we found, quite close to the surface, fifteen tablets from the reign of Samsu-Iluna, King of Babylon (circa 1900 B.C.), Cyrus the Great, and Cambyses, as well as a round tablet of very archaic character bearing the names of four ancient kings of Nippur. In that nose of the hill we found tablets at all depths, and for the most part mixed in with graves and funeral pottery. Near the highest part of the mound we sank a well in the floor of a room of the Xerxes period down through masses of débris and rubble to plain level, which was thirteen metres beneath the surface at that point. This well was reached by a deep, open trench from the northwest, with tunnels run out at various points in the sides, and a further exit by a tunnel to the southwest.

We found no structures of any importance in this hill, but in a large square cut near the mouth of the deep trench were several houses of unbaked clay. In these were found abundance of remains, and one room in particular, which was stuccoed within with a stucco of

yellowish-pinkish tint, was full of tablets and jars, the latter containing fish bones, date seeds, grain, and the like. In a grave in a different part of the trench we found some tablets in a tomb. Here a tub-shaped coffin had been enclosed in a sort of rough vault of unbaked brick and the tablets lay by the side of the coffin. In the same locality, but at a depth of ten metres below the surface, in a tunnel run out of the northeast side of the great trench, we found a jar containing three tablets of the Hammurabi period; while more tablets lay on the ground by the side of the jar. One could not but be reminded of the account in the thirty-second chapter of Jeremiah of the purchase by the prophet of the land of his cousin, Hanameel, at Anathoth, on which occasion the contract, written on a case-tablet, that is, a tablet within and an envelope of clay without, was placed in a jar and buried in the earth.[1] Beside the kings already mentioned, we found in this mound the first-year tablets of Nabonidus, Evil-Merodach, Darius, and Xerxes, as well as of the kings of the Hammurabi dynasty. The inscribed tablets found here during the first year covered, in other words, a period of about fifteen hundred years, which was not itself singular; but it was singular that we should have discovered at the very outset tablets of Cambyses and Samsu-Iluna lying side by side.

Near the close of the first year's work we found in a

[1] This passage is obscure in the Hebrew, and the English translations, both the Westminster and the Canterbury versions, render the sense incorrectly. The eleventh verse read originally: "So I took the deed of purchase, both the closed and the open," etc. That is, the deed of purchase was on a clay tablet, "the closed," around which was an envelope of clay, "the open," on which the contract was repeated. The whole was to be buried in "an earthen vessel, that they may continue many days," as we are told in the 14th verse. After the use of clay tablets had altogether gone out and parchment and other similar writing material taken its place, the passage became unintelligible to the late Jewish scribe. What was the sense of a closed, or as he thought of it, sealed, and an open deed? Evidently there was a mystic sense in the words. Some scribe comparing the

nose of the hill on the western side what we at first supposed was a tablet furnace, out of which we took a number of tablets of the Hammurabi period, looking as though they had been made but yesterday. Just after this discovery came the catastrophe which closed our work. But before we left Nippur, to prevent this trench, which was the one then yielding tablets, from depredation in our absence, we filled it in with earth. It was at that place that the four Arabs from Jimjimeh conducted their surreptitious diggings during the following summer, but without any results of consequence. One or two tablets they probably did secure, and later one of these, a tablet of the Hammurabi period, containing a record of the sale of a plot of land and a well, appeared in Constantinople. I attempted to secure it, but before I could do so, Golenisheff bought it for the Hermitage Museum, at St. Petersburg.

The second year I conducted much more extensive excavations at this mound; and although the yield of tablets was by no means so large as in the hills on the other side of the canal, yet about one fifth or one fourth of the whole amount secured was taken from hill V. I riddled it with trenches everywhere. This year also I was able to reach somewhat more satisfactory conclusions as to the

verse with Isaiah viii., 16: "Bind thou up the testimony, seal the law," found in it a reference to the law, and wrote on the margin, or between the lines of his copy of Jeremiah, as a pietistic gloss to the word "sealed," the words, "the law and custom," or better, "tradition." A later copyist wrote these words into the the text: "So I took the deed of purchase, both the closed (the law and tradition), and the open." Our translators have increased the obscurity by introducing before this gloss the words "according to," so that the passage now reads in the Canterbury version: "So I took the deed of the purchase, both that which was sealed, *according to* the law and custom, and that which was open."

It may not be amiss to call attention here to the Roman use for contracts and the like of small wooden tablets similar in size and shape to the Babylonian clay tablets. Some of these from Pompeii, badly charred and burned, but still legible, are to be seen in the Museum at Naples.

strata, and although we found little in the way of constructions, yet this hill proved, on the whole, the most satisfactory of all for the study of domestic antiquities, and also of graves. Very little below the surface we found tablets of the Persian and late Babylonian periods, and a few mud-brick constructions identified by the tablets as belonging to the same period. These tablets were not, as a rule, deposited together; nor were they, in the greater number of cases within buildings which we could trace. They seemed to lie loose in the earth, as our Arabs reported they discovered them at Jimjimeh, that is, Babylon, and Borsippa. So, for instance, on the top of this hill, one and a half metres below the surface, close to a little hole full of ashes, we found lying together in the earth a number of tablets of the Persian kings, with one of Nabonidus.

Above this stratum there were no evidences of occupation in the shape of constructions, but there were burials of the Parthian, Sassanian, and Arabic periods, both above and in this stratum of tablets. A little below the Persian and late Babylonian tablet stratum, we began to find burials of the Persian period, one coffin having in it a couple of Persian cylinders. Then we came to burials of the Babylonian period, from 550 to 1000 B.C., one or two of the graves containing Babylonian cone seals. Here we found a few tablets of the middle Babylonian epoch, and one or two of Assyrian date. Below this, at a depth of seven to nine metres below the surface, for depths varied in different parts of the hill, we came upon rooms destroyed by fire, containing large quantities of tablets of the Hammurabi period. The walls of these houses were built of unbaked brick, excepting that at the bottom there were sometimes two or three layers of baked bricks, or occasionally a baseboard of the same, and the door-posts and sills were also constructed of baked bricks. None of these houses were of any considerable size, all of

them looking like the ordinary dwellings of citizens of the present day in such provincial towns as Hillah or Shatra. They were presumably of one story with a couple of small roof rooms reached by stair from the court. To the street they presented a blank wall, and they were built around one or two courts on which the rooms opened. There was no pretence at architecture or ornamentation. The roofs of these houses had been made of palm-beams covered with mats on which was laid a great mass of earth. If the earth on the top was not cared for, a couple of rainy seasons would wash great gullies in it, and bring about the downfall of the whole. If a fire broke out in the house the palm-beams beneath the earth would burn through and let the mass of earth above fall into the room. In one of these ways, all of these houses were destroyed, and, the roofs having once fallen in, the upper portions of the walls were washed down by the rains until the earth within the rooms had filled up to the top of what was left of the walls. This washed-in earth protected the lower portion of the walls, as well as all the objects already buried within, against further injury, the whole looking from the outside like nothing but a heap of clay.

Hammurabi is now identified by several assyriologists with Amraphel, King of Babylon, mentioned in the fourteenth chapter of Genesis, in which case he would have been a contemporary of Abraham, living about 2275 B.C. Beneath the rooms of his period we found tablets of a still earlier time, but bearing no names by which to date them more accurately. At one place we found several tablets ready to be inscribed, some of them marked with lines and squares, like account tablets, but totally without inscription. We conducted excavations as deep as plain level, and finding in the lowest strata nothing but rubble and common pottery, with no inscribed objects or constructions of interest, stopped at

that point. I only observed on this hill one construction which seemed to have been more than an ordinary house. This was in one of the gullies on the western side of the mound and belonged to the middle, or later Babylonian period. I traced here for some distance a wall which had some architectural pretensions, being adorned by square half pillars at regular intervals on the outside. I could not explore it at the time, as I was obliged to concentrate my work of excavation on the Temple Hill and the Cossæan palace. Indeed, the excavations on hill V were conducted primarily for the purpose of securing inscribed objects, for that was naturally the constant demand of the home committee, and by the discovery of these, or failure to discover them, the success of our Expedition would be judged.

As far as I examined this hill it seemed to have been, from the period of Hammurabi, at all events, down to the Persian time, the home of well-to-do citizens, rather than the site of the great public buildings of the city. The reason why tablets and coffin-remains were found, as they occasionally were, lying loose in the earth or confused among buildings with which they did not belong, is probably due to the fact that tablets and other articles of value were frequently buried beneath the floors of the houses for safer preservation. This is the practice to-day in the country, and I have myself seen a man dig out from his floor antiquities, and other highly-esteemed objects, which he had concealed there. These tablets were of the ordinary so-called contract variety; that is, they dealt with ordinary transactions of barter, sale, and the like (one from the year 561 B.C., for example, deals with a transaction involving fifteen measures of grain), and individuals seem to have preserved them in many cases by burying them beneath the surface of the ground within their houses, as people in that country preserve their valuables to this day. As already stated, burials of the

Excavations on the western side of Hill V. The rooms shown in the foreground belong to the Hammurabi Period, circa 2000 B.C.

same sort, that is, beneath houses, still occur in the city of Baghdad, and the *Arabian Nights* refers to the same method of burial as practised in the time of the Caliphate. Of course, if both tablets and coffins were buried beneath the houses, they would be found together afterward lying in the earth, or among constructions of an earlier date than that to which they belonged, precisely as we found them. In some cases the tablets were not buried but kept in the rooms, and when the roofs and walls fell in, they fell into the general miscellany. As already stated, a few case tablets were actually buried with the dead, along with pottery, food, and utensils of various descriptions. At the outset, when we supposed that Camp Hill was a necropolis, we designated hill V as the City of the Living, and no hill did, in fact, give us a better idea of the people, or a larger supply of domestic utensils. Among the curious finds on this hill were a number of privies, which the workmen at once identified by their similarity to the privies now in use in Hillah and other towns; and we, by the sediment within. The well part of these privies consisted generally of pottery rings, but in one or two cases it was made of brick. At the top were platforms of brick, and sometimes three or four privy or drain openings were in one platform, the floor of a small court, or room, constructed for the purpose. It is curious to observe that, whereas on the Camp Hill we found exclusively tablets of the Cossæan dynasty, on this hill we found none whatsoever from that dynasty; but, on the other hand, almost all the tablets of the Hammurabi dynasty found at Nippur came from this hill. We abandoned this hill about the middle of March of the second year, because we had ceased to find tablets in paying quantities, while hill X, on the other side of the canal, had begun to yield in an extraordinary manner, and we needed our tablet diggers for that hill. There is doubtless still much valuable material in Hill V, and it

would be desirable some time to cut out a section of the hill, removing it stratum by stratum. The plate facing page 200 represents the appearance of some rooms of the Hammurabi dynasty, in one of the western gullies of this hill. The niche on the side wall about three metres below the surface, marks the place where a coffin of the Persian period was found. The door towards the left side below is the opening of a tunnel which leads through to similar excavations in the next gully. The plate facing page 250, in Volume I., shows the appearance of the great trench in the northwestern nose of the hill at the close of the first year's work. At the end this trench was thirteen metres deep. The walls of unbaked brick visible near the top of the trench at the deep end belong to a house of the time of Xerxes.

Between the temple and the Camp Hill was a low, ill-defined mound (VI). From its position in relation to the temple we judged this to possess some importance. There were two points a little higher than the rest, one rising about eight and the other about six metres above plain level. From the position of these and the discovery of a few gypsum fragments near one of them, we conjectured that there might possibly be a gateway there, and decided to run tunnels into both points to test them at as low a level as possible. We found at first in both of these mounds graves of the usual Parthian and Sassanian varieties. We also found similar graves on the very top of the mounds at various points, exposed, or almost exposed, on the surface. In the more northerly of the points excavated, we found at a lower level in a tunnel a brick tomb containing ten skeletons. We found no indications of constructions anywhere. The larger trenches were at the more southerly of the two mounds. Here we found a few fragments of tablets, and at the distance of three to four metres below the surface we were plainly in Babylonian strata. In the pottery débris about a well

we found one very ancient tablet. It was circular, with but a few lines of writing on it containing the names of ancient kings of Nippur. At a later date it had been perforated and used for some domestic purpose apparently. When the hole was dug to sink a pottery drain this was thrown in with other fragments to fill up about the drain. On the surface at this part of the hill we found a pottery furnace. There was a well-like place of brick, the bricks burned away or made brittle by fire, and on the sides and at the bottom quantities of ashes were packed as from constant burning. The men recognized it as a pottery furnace at once from its resemblance to those in use to-day. Later, we found similar furnaces on hills V and X.

In the second year, toward the close, I made a few soundings at other points on this mound to ascertain whether there were elsewhere signs of constructions or tablets, and also to ascertain, if possible, the general character of the remains buried here, but without result. At only one place did I find anything of importance. This was on the extreme southern nose. The Shatt-en-Nil, and the basin-like depression to the southeast of the temple are separated by a little ridge of earth which may have washed down from the surrounding hills, and which at its highest point is now some four metres above plain level. In this ridge I ran a trial trench to ascertain what it was, but I found nothing but débris which must have been washed down from the mounds about. Driving the trench into the nose of hill VI, I found a brick stamp of Naram-Sin, and a few extremely archaic tablet fragments. Evidently at that level in mound VI we were in the period of the Sargonids. I did not find any structures, however, and the trench was no more than a sounding trench. I was unable to form any inference as to the nature of the constructions buried beneath this mound.

At the very edge of the hills of Nufar, eastward of the

Temple Hill, there was a curiously shaped mass of mounds running in a succession of lines or ridges (VII). Part of this mass, apparently, was a continuation of the outer wall line, visible at XI, to the north of the Temple Hill. In the first year we ran a trial trench in this hill to ascertain, if possible, its general character, and whether it was worth excavating at that time. We chose a point which, as it seemed to us, might possibly have been connected with an entrance through the wall without, immediately opposite a gate-like depression in the outer edge. We found absolutely nothing. There was a terrace of unbaked bricks of small size resting on a mat, and above this a loose mass of clay, ashes, and rubble, so compounded that one might well have supposed that it had once been the bed of a water-course, had that been possible. We found one coffin here, which from later experience I am able to say belonged to the Babylonian period, and the surface of the mound was everywhere strewn with reddish pottery fragments belonging to the same period. We abandoned the excavations as unprofitable, and I did not sound these mounds further in the second year.

Hill VIII was a promising looking mound, or collection of mounds, to the northwest of the temple on the eastern side of the canal. The highest point of these mounds was some twelve metres above plain level. Our excavations here resulted in the unearthing of a portion of a fine-looking structure of large blocks of mud-brick, evidently a public building of some sort. We were able to explore but a very small part of this structure, too small to give any idea of its purpose or plan. Nothing in particular was found in connection with this building, which is represented by the square hole on mound VIII in the general view of the mounds; but in the trench near the mouth of the gully leading up to this we found some valuable tablets and tablet fragments. Among these was a tablet of the twenty-sixth year of Ashurbanipal, King

of Assyria, and another from the sixth year of his son Ashur-etil-ilani, that is, 620 B.C. Almost all of the tablets found here were found lying together loose in the earth, very little below the surface, in a gully where the water had washed off the upper layers, in a space about the shape and size of a coffin. The Ashur-etil-ilani tablet, with some other fragments, lay close to a little hollow in the ground which was full of ashes. The burials which we found in this mound were, for the most part, of the Babylonian or Assyrian periods. There was one curious feature about them which I also noted in rare cases at V. The urn and tub-shaped coffins were turned upside down, and some of the dishes and jars containing date kernels, grain, fish bones, and the like, within the coffins, were similarly treated. It had evidently been done of set purpose. There was some rather curious pottery found on this mound, including two incantation bowls with illegible and mystic characters and symbols fastened together mouth to mouth with bitumen; and a very obscene Priapus figure of an ape. In the second year I ran a few sounding-trenches at various points on the eastern side of hill VIII, with a view to ascertaining the general nature of the contents of the mounds; but none of these added anything to my former knowledge. I should judge that the building which we commenced excavating was well worth exploring, and that it was a public building of some importance in the later Babylonian period.

Next southward of hill IV, on the northwestern side of the canal, was a very prominent hill point, rising, according to Field's measurements, eighteen metres above plain level. In a gully on the southeastern side of this mound, at a point some ten metres above plain level and eight metres below the summit of the mound we ran a sounding trench. Almost at the outset we discovered a curious oval coffin, which, from later experience, I should suppose

belonged to the Babylonian period. By this coffin was a mat on which, without any covering, a child's body had been buried. The little skeleton lay on its side, its feet somewhat drawn up, as in sleep. Near the head was a small, plain vase, which had once contained food or drink. The mouth of this had been closed with a green cup which we found in fragments. We found here mud-brick walls of houses, but so broken that we did not succeed in following them far. There were also a few fragments of tablets of the middle Babylonian period; but in general the results of the work in this trench were extremely unsatisfactory. In the second year, in my search for tablets, I bored a few holes on the back of this hill at various points, starting low down in the gullies, as experience had taught me to do, and found some very large tablets of the Cossæan period. Noticing on the top of the hill the whitish lines which mark house-walls beneath, I excavated there also and found a Jewish house with a couple of Jewish incantation bowls.

Toward the close of the second year, I ran a trench, as shown on the plan of levels, from the bottom of this hill out into the canal-bed to meet a similar trench which started from V on the opposite side of the canal. My object was to find the quays on both sides and determine their level, and also to ascertain, if possible, the depth of the canal itself. I did not succeed in finding the quays on either side. My excavations in the canal-bed proper were conducted to a depth of four metres, always through rubble containing no objects of any sort except minute sherds of pottery, and the like. At this depth I was obliged to abandon the trench, because the rains filled it with water. Later, Mr. Haynes found the quays at a point opposite VI. He also found an interesting terra-cotta fountain in the middle of the canal at that point.

The hill which yielded far the largest amount of tablets was the hill designated X on the plans, the most southerly

portion of the hills on the northwestern side of the canal-bed. As will be seen from the general view, the trench which we conducted on this hill in the first year was cut in the highest portion of the mound, some fourteen metres above plain level. Here we found fragments of tablets of the late Babylonian and Persian periods and mud-brick walls of some constructions of no great importance. The second year our camp was located on the plain just below this mound, and it was this old trench from which we gave the exhibition of fireworks described in a previous chapter. At the time when the heavy rains rendered it impossible for us to work in the regular trenches, having a few foremen from Jimjimeh and Hillah whom we were obliged to pay rain or shine, we took them on to this hill and had them dig sounding-trenches at various points in the interior where the water had washed out deep gullies. We soon began to find tablets in large amounts. Our first finds of importance were in a gully just to the northeast of the first year's trenches, at the point marked E on the plan of levels. Here were houses of the same character as those found in hill V, built of mud brick with doorways and baseboards of burned brick, which had been destroyed by some conflagration. In the rooms of these buildings, mixed with the earth which had fallen from the roofs and from the walls, we found quantities of tablets of the period of the supremacy of Ur, 2500 B.C. and thereabouts. Many of these were case tablets, chiefly of a rather small size. Very large numbers of them were marked with seal impressions, several of these seals bearing the name of Gimil-Sin of Ur. One of these seals reads: "Gimil-Sin, the powerful king, King of Ur, King of the four regions; Amil Shamash (servant of the sun-god), son of Ur. Sergi, viceroy of Adab, secretary." Many of the seals contained a representation of the god Bel with a votive inscription. On two or three of the seal impressions I

noticed an interesting form of the sun symbol, namely, a square cross in a circle. Mixed with the tablets in these rooms, and in general in the stratum on hill X, we found grotesque and, from our point of view, obscene clay figures of a naked female holding her breasts, and with the sexual parts exposed. The noses of these figures were absurdly prominent, and the hair looked like a court wig. Below they were shaped like mummies. There were also clay figures of a bearded man carrying something slung over his shoulder. Occasionally other figures occurred, but the workmanship was always rude to grotesqueness. The houses in this gully were very heavily plastered, but the conflagration which had destroyed them rendered it impossible to determine whether the plaster had been tinted or decorated in any manner. Many of the tablets from these houses also showed marks of the conflagration. The houses of this period are shown in the plate facing this page.

In this same general locality, washed down into the gully, we found a seal cylinder of lapis lazuli, and here and there occurred fragments of inscribed stone. There were also two magnesite knobs, like those found in the temple. Some of these objects belonged to the Cossæan period. Above the houses of the Gimil-Sin time was a stratum of well-made buildings of small-sized mud-bricks, well set. Above these were tablets of the Babylonian period from 1000 B.C.; and above these, at the surface of the mounds, late Babylonian and Persian tablets. Some of the latter were found in a whitewashed room at the highest point of X, near the trench of the first year, shown in the general view of the mounds.

At the point marked F, to the northwest of, and at a higher level than the rooms of the Gimil Sin period, we made our largest find of tablets. Here, in one room of a house of unbaked brick, about ten metres long by five metres broad, there had evidently been a depository of

tablets; these had been placed around the walls of the room on wooden shelves, the ashes of which we found mixed with the tablets on the floor. We took out of this room thousands of tablets, and fragments of tablets, of unbaked clay. For four days eight gangs were taking out tablets from this room, as fast as they could work, and for four days the tablets were brought into camp by boxfuls, faster than we could handle them. These tablets were of later date than the ones found at E, as might be conjectured from the difference of level. Other rooms of this group contained tablets in fair numbers, but in no other had they been stored in the same way in which they had been stored in F. Close to F, to the northeastward, was a brick structure, on which tablets were found half-imbedded in bitumen. Between the two was a brick well, the bricks laid in bitumen. The débris in this well, like all the débris in that immediate neighborhood, was full of unbaked tablets, with occasional baked ones intermixed. We excavated the well to a depth of 14.5 metres, at which point, 4.5 metres below plain level, we struck water, finding for over thirteen metres, fragments of tablets, most of which were badly injured by water. Neither in this series of rooms, nor at E, did we find any pottery or household utensils.

At the point marked C, well up in a gully to the northwest of F, I found a deposit of tablets of the Cossæan period, all baked and some of enormous size. At almost all points on this hill tablets were found, and almost every one of the trenches represented on the plan of levels produced tablets of different periods, according to their levels. In no case did we find structures of any importance. Such walls as we found appeared to belong to ordinary houses, such as we had discovered at V. Later, Haynes ran more trenches on this hill, always finding tablets in great abundance, and at the point H, on the extreme southern edge of the hill, in a gully, entering

the mound with a trench at a low level, he found remains of the Sargon period. At one or two points on this mound, at the very top, I found Hebrew bowls. A little below these, at the depth of two or three metres below the highest level, I came on tablets of the Persian and late Babylonian period. About four or five metres below the surface we were in the Cossæan period. A little below this we were in the Hammurabi period, and at a depth of from eight to ten metres below the 14-metre level, we were in the times of the kings of Ur. As in the case of hill V, I should very much like to see this hill cut in a sufficiently large section at some one point, and the strata more carefully examined. My trenches here were dug principally for tablets. The tablets found had to do, in general, with temple business.

Toward the close of the second year of the excavations I made some examination of what appeared to be a wall line to the north of the temple (XI). This was, in fact, the ancient outer wall of Nippur, Nimitti Bel of the inscriptions. I found here an enormous wall of Ur-Gur, readily recognized by the characteristic small-sized, unbaked bricks of that monarch. Having satisfied myself that this mound was the city wall, I made no further investigation, as the men were required for other purposes; but later, Haynes, at my suggestion, examined it more thoroughly, and found that immediately beneath the wall of Ur-Gur was a wall of Naram-Sin, the crude bricks of which it was constructed bearing his stamp. Here, as in the temple, the construction of Ur-Gur rested immediately on that of Naram-Sin without anything intervening. This wall line is marked XI on the general plan. Anxious to ascertain the character of the open space to the north of the temple between this wall and mound VIII, I carried the trench which had been run into the wall line out into the open space a very short distance, and found below plain level a room of mud-brick built against Ur-

Gur's wall. I found no objects of any sort there, and I had no time later to make soundings at other points in that open space to determine its character.

An examination of the general view of Nippur shows that the outer wall, Nimitti-Bel, can be readily traced by the eye only at two points, one that at which I conducted the trench just mentioned, and the other immediately to the northwest of hill VIII. Elsewhere, the wall has either been destroyed, or else it forms a part of the neighboring congeries of mounds. The outer eastern edge of VII seemed to be a continuation of this wall. Just beyond this southward were two small outlying mounds (XII). Anxious to determine what were the limits of the city wall, toward the end of the second year I put a gang on these mounds to make soundings. They did not find any wall or any constructions, but only a formless mass of ashes with burials on top. I was unable to conduct excavations at more distant points with the view of finding the outer wall in other places, and to this day we do not know what was the line followed by it, nor the size of the city enclosed within the wall.

CHAPTER VIII.

COFFINS AND BURIAL CUSTOMS.

Greek Influence—Clay Coffins—The Slipper Shape—Burial in Jars—Tub and Bowl Coffins—Double Urns—Arabian Graves—Dates of Burials—Objects in Babylonian Graves—Objects in later Graves—A Greek Grave—Burial Customs—Egyptian Influence—Zerghul and el-Hibba—Body-graves and Ash-graves—Method of Cremation—Grave of a Child—Origin of Coffins—Receptacles for Ashes—Cremation and Interment—Funeral Sacrifices—Abandonment of Cremation—Increasing Respect for Body—Burial displaces Cremation.

BY far the most ornamental coffins found at Nippur were the slipper-shaped coffins of thick, half-burned yellowish clay, covered with a blue glaze, which, as a rule, became greenish through the action of moisture, and ornamented with lines, bosses, and naked female figures. In this regard the ornamentation of these coffins differs from that of the coffins found by Loftus at Warka, of which a specimen was sent to the British Museum. On those coffins the figures are warriors with high caps, and are identified as Sassanian, particularly by the head-dress. We found only one or two coffins at Nippur with figures at all resembling these. Where there was any ornamentation in the shape of figures it was, as a rule, female figures, naked, with prominent breasts, the hair and lower limbs frequently terminating in arabesque curves. These figures show evidence of Greek influence, and it is probable that this style of coffin was developed first in the Seleucidan period, but those which I was able certainly to date were Parthian, as shown by coins and other objects found

Coffins in Hill V. Slipper-shaped Coffin above; Tub and Urn Coffins below.

with them. They were found on the temple mound, on the ruins of the constructions of the late Babylonian period described in the last chapter, from the surface down to a depth of 2.5 metres. They were found at the same depths on the other mounds, excepting on the Camp Hill, I. Here, as already pointed out, there was a much greater accumulation of débris of a late period than on the other mounds, and coffins of this type were found as deep as 8.5 metres below the summit of the mound. On this mound also we found a few slipper-shaped coffins with a crown or lip at the head, projecting a few inches.

Besides the coffins with female figures and the one or two with figures wearing the Sassanian head-dress, there were also coffins with the same blue glaze, decorated merely in line and boss patterns. These were found in the same strata as the others and belonged to the same general period. There were also plain coffins of the same style, some of them unglazed but with the line patterns, and some of them absolutely plain without either glaze or pattern. These were all slipper-shaped, generally under two metres in length, with an oval opening at the head, and a hole at the foot of the coffin. Some of them were closed with lids made specially for the purpose; more often they were closed by a couple of beet-shaped urns, less often by pieces of pottery or brick. The bodies were laid at full length in these coffins, generally on the back, more seldom on the side, and where beet-shaped urns closed the openings these ordinarily contained the bones of other bodies. In one case the bones of one body were divided between two such beet-shaped urns. Occasionally there were two bodies, instead of one, within the coffin. When first exposed to the air it was often possible to detect the texture of the clothing by which they were covered. There was a coarser outer garment of a texture like that of the abbayehs or cloaks worn

by the Arabs of to-day, and finer inner garments. Further than this we could not go. The clothing rapidly turned to powder, even when not touched by the hand. Even the skulls and bones soon fell to pieces. We often found these coffins in nests together, sometimes side by side, sometimes lying one on top of another.

Once we found not far below the surface on hill X a coffin of a slightly different shape, which my men described as the shape of a lady's foot. The workmen said that this type was very common at Babylon. The stratum where this coffin was found appeared to be Persian, or very late Babylonian. I did not meet any coffins of the slipper-shaped type which I could surely say were beneath the Parthian or Seleucidan strata. There were places, like the surface of some of the low outlying mounds, where burials of all ages occurred pell-mell, and I am not prepared to state as an absolute fact that the slipper-shaped coffin does not occur in the Babylonian level proper, although such was my general impression. The brick tombs which we found were also, with one possible exception, in the same stratum as the slipper-shaped coffins. I have already described the contents of two of these tombs found on the Camp Hill. We found two more among the ruins of the Babylonian constructions on the Temple Hill, one on hill V, and one on hill VI. It is the latter which possibly, judging from its level and the objects found there, may have been of earlier date.

Besides these burials, which were those of the more well-to-do classes, we found also in the upper strata burials made in common jars or urns. The great water jars, bitumened within, about a metre in height, were the favorite jars for this purpose. Where the narrow mouthed variety was used, the lip was broken off in order to allow the remains to be thrust in. Where burials were made in jars like these the body was doubled together, or divided, since otherwise it was impossible to insert it in the jar.

These large bitumened jars are found without change of type from a period considerably ante-dating Sargon, down to the latest period of the mounds, and not only in all parts of Babylonia, but also up the Euphrates, at least as far as Salahieh near Deir. The jars themselves do not, therefore, furnish any clue to the date of the burials, but all such interments were, in fact, found very close to the surface. They are contemporary with, and later than, the burials in the slipper-shaped coffins, but they are also a continuation of a much later use, the only peculiarity being the use of the beet-shaped water jars, instead of urns of another form.

The characteristic coffins of the Babylonian period from at least 2000 B.C. onward to the close of the Persian era, have the shape of a baby's bath tub, and are not much more than a metre in length. The ordinary relation of slipper-shaped and tub-shaped coffins in the strata of the mounds is well shown in the plate facing page 214. There, near the surface of the mound, is seen a slipper-shaped coffin, while somewhat more than a metre beneath this there is a tub-shaped coffin—the one on the left. To the right of the latter is another almost equally characteristic type of this period. This is a large bowl, somewhat more than half a metre in diameter, and of about the same depth. These urns or bowls ordinarily lay on their side in the manner shown in the photograph. The tub-shaped coffins were sometimes enclosed in a sort of tomb of unbaked brick. They were also frequently covered with wood, and in both the tub-shaped and the bowl-shaped coffins the body ordinarily rested upon a mat. It was, of course, impossible to place the bodies in these coffins at full length, and they were generally separated at the thigh. There seemed to be no rule about the position in which the body should be placed; sometimes the head was at one end and sometimes at the other, and sometimes in the middle. Occasionally two bodies were placed

in the same coffin. The object seemed to be to place the body in the coffin, and further than this there was no rule. Once or twice the dead had evidently been dressed only in a loin cloth, at other times there were remains of cloth over the entire body, and sometimes there were no indications of cloth, which might, however, have been due merely to the total disappearance of the texture in the earth. In all cases these coffins, both of the tub- and the bowl-types were full of earth that had fallen in from the ground around.

Occasionally coffins of both of these types were found inverted, and particularly was this the case, as already stated, in hill VIII. Sometimes urns approximating in shape the bowl shown in Plate IV., Fig. 2, were substituted for coffins. Along with these in the older levels, at and before the time of Hammurabi, I found burials similar to those in the mound of Juha, opposite Anbar, described in volume I. page 171. Two open-mouthed urns of the general type shown in Plate VII., Fig. 7, one somewhat smaller than the other, were joined together, the mouth of the smaller inserted in the mouth of the larger, and the junction plastered with mud. Thus joined, these two urns formed a coffin about two metres in length. I did not find coffins of this type in the later Babylonian levels, but the tub and bowl varieties persisted from at least the time of Hammurabi until the time of Nabonidus, without apparent change, either in the texture of the pottery or the style of the coffins. Sometimes, as already stated, I found poorer burials in urns and jars made for other purposes; and once I found a child's body buried in a clay kneading trough.

There was one other type of coffin of this same period, of which only two specimens were found, the one shown in the plate facing page 220, which may be described as the whale-back type. These coffins were almost, if not quite, as long as the slipper shaped, but without the bulge

at the head which gives the latter their characteristic form. They were covered with adobe, which was rounded like the back of a whale. How early these appear, or how late, I cannot say, as we found only two specimens in hill IX, at about the same level, in what was clearly the Babylonian period, but which we could not date more closely.

Of the burials earlier than 2000 B.C., or possibly 2500 B.C., I am able to say nothing for Nippur. Later than the time of the Parthian and Sassanian burials we found a few Arabic burials. These consisted ordinarily of little graves of mud brick. The body was laid in the ground and mud bricks, or sometimes baked bricks from various parts of the ruins, were built over it in such a manner as to shield it from direct contact with the earth.

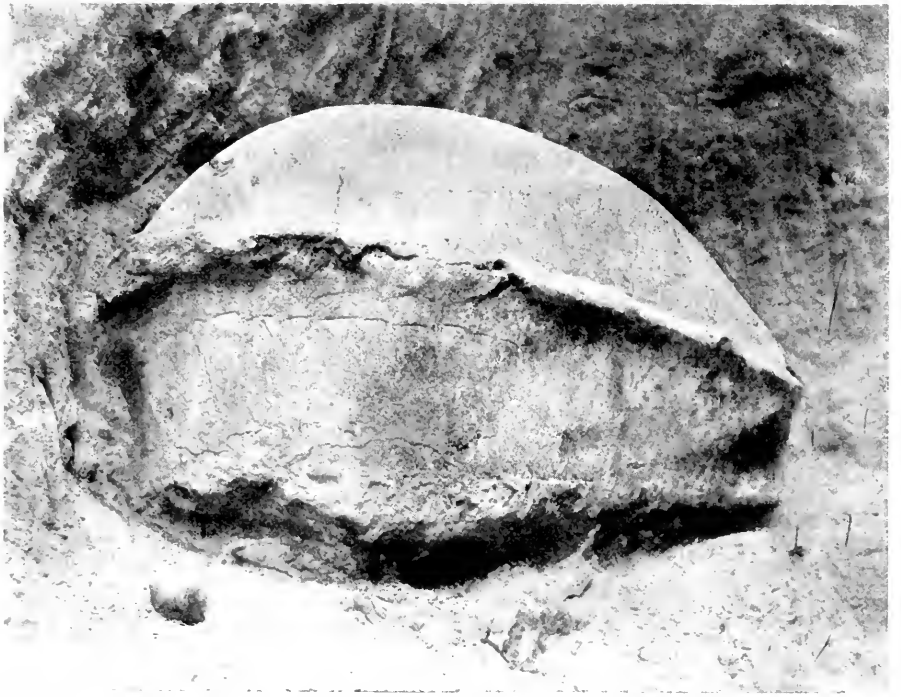
We were able to date the coffins both by the strata in which they were found, and also by objects found in and with them, especially seal cylinders and tablets. The coffins once dated, it was comparatively easy to date pottery, implements, and the like, which were found in large quantities in or by these coffins. In the use of metal I observed that the gold ornaments were found almost exclusively in the Seleucidan, Parthian, and Sassanian graves; whereas the copper and iron belonged almost entirely to the Babylonian burials. The silver objects were more equally divided between them. Such glass as was found in the graves was found in the Seleucidan and later graves; but the finest pottery was in the Babylonian period. That period is, of course, one of great extent, and it must be possible some day to determine more exactly the dates of particular forms and ornaments. At present I am able to note only a few peculiarly characteristic types.

The pottery of the Cossæan period was the most characteristic. This is marked by its peculiar glaze. In connection with the great palace or public building on the

Camp Hill I found some specimens of pottery of this period of very curious shapes, glazed yellow and green (blue) in stripes. This is shown in the plate facing page 188. There was also a considerable amount of white pottery belonging to this period, in the preparation of the glaze of which magnesite was used. It will be remembered that magnesite from Eubœa was found in the mounds in front of the Temple Hill, in a room of the Cossæan period, as described in Chapter III.

The following notes on some of these coffins, and the objects found with them, will give the best idea of the method of burial and of its meaning. The custom of providing the dead with food and drink in the Babylonian time almost, if not quite, died out in the later period, and it will be observed also that there were fewer domestic utensils, and implements, discovered in the later graves, such objects as are found being chiefly of the nature of ornaments. I will give first some notes on the coffins of the Babylonian period.

In hill V, 5 metres below the surface, we found a tub-shaped coffin, outside length 1.22 metres, inside length 1.10 metres; outside breadth 45 centimetres, height 58 centimetres. There were two ornamental lines around the coffin, just below the rim. The sides were very thick. The skull was towards the square, not the round end of this coffin. It was very thick and the forehead low and receding; apparently the skull of a negro. There were in this immediate neighborhood several other burials of persons of the same race, mixed in with the more common burials of persons of a higher race having skulls long and well shaped. This coffin had been covered with crude brick. Above the body and on one side of it were the remains of boards. On one wrist was a copper bracelet, and in the earth by the head were a lyre-shaped copper nose-ring, and a quantity of beads. There were burned date kernels in this coffin. Outside, below the foot of the



Whale-backed Coffin of Babylonian Period, found in Hill IX.

coffin, to the right, was, a large thick broken bowl or dish, and near the head of the coffin were three vases; all of them with graceful lines. One of these, pointed below, and some 14 centimetres in height, was covered with a white enamel and had been originally ornamented with two rings of color about its broadest point, which showed as a very faint yellow. Another, of different shape, with a flat bottom, was decorated with a more elaborate pattern in color on a white body. This pattern also showed faint yellow. The third was of a still different form, but decorated like the first. The white enamel which formed the body in all of these vases was badly put on and blotchy. The beads, of which there were over a hundred, were not round but longish; a few of them were copper, the rest were stones in various colors. I judged this coffin to belong to the Cossæan period.

Beyond, and slightly above this, there was a large urn or bowl of coffin material, of very thick, half-baked clay, half a metre in diameter at the mouth, and half a metre deep, containing the bones of a child, a copper anklet, and some round beads.

Close to these two, and at a slightly higher level than the first coffin, was a third coffin, tub shaped, but very small, only 80 centimetres long, 35 centimetres wide, and 25 centimetres high. In this were the bones of a very tall person. The skull was well formed and long. There were found in this coffin only beads and a copper instrument, similar to those now used by the Arabs to put kohl on the eyes.

In another part of this hill, at a distance of about 4 metres below the surface, we found a broken coffin of the same form as the last, like a bath-tub, longish, oval at one end, and square at the other. This was 1.11 metres in length, .56 metres in breadth, and .45 metres in depth. The body was covered with palm wood and the coffin was enclosed in a sort of tomb of unburned brick. On the

breast was a metal mirror with the handle turned toward the legs; and below this, near the hands, 26 stones and beads of a necklace, two red-veined marble seals, a pair of copper earrings, a fragment of a lyre-shaped nose-ring, a fragment of a large brooch of the same shape, and two pieces of a silver bracelet. At the head was a small roundish ball-shaped vase, glazed blue originally, I suppose, but as we found it, green.

On top of this was another coffin of the same shape, broken near the foot and mended with bitumen. At the foot of the body in this coffin was a copper bowl. We found here also a Babylonian seal cylinder, not inscribed, an iron arrowhead, two pieces of an iron dagger, a fragment of an iron knife, and an egg-shaped vase with the same green glaze as the one just described. In the clay mud of the tomb outside of these two coffins was a black polishing stone. Underneath these coffins were wood and mats. The body in the second coffin seemed to have been cut or dissevered at the thighs. Both of these graves were Babylonian, and presumably later than the one first described; but a more precise date I am not able to give.

Some .60 metres below the mud-brick tomb last described, was a large bowl of coffin material; its height .50 metres, and the diameter of the opening .48 metres, lying on its side. In this were found a large clay vase, unglazed, decorated with a very simple line pattern; a small clay pitcher of similar material; a number of beads of a necklace; and two gold rosettes of a nose-ring. At a little lower level a mortar bowl of somewhat similar shape had been buried with the mouth uppermost. This had been closed with wood, covered with mud brick, but the wood had given way and the brick and earth had fallen in. This bowl was .50 metres in height, with a diameter of .70 metres at the opening and .83 metres at its broadest point. On the bottom, wood had been laid

before the body was put in. The body had been cut or broken before placing in the bowl. There was cloth on the bones. On the breast was a fragmentary copper cup, or dish. There was also, a green vase, originally blue, pointed at the foot; and fragments of an egg-shaped yellow vase.

Leaning against this was a similar urn, broken, of a somewhat greater height, in which we found a skull, a very few bones, and a quantity of ashes. Upon the skull was a copper mirror.

Not far from the last-described coffins, in the same mound, about four metres below the surface, we found a coffin composed of two urns, the mouth of one fitted into that of the other, both very much broken. The diameter of the opening of the smaller urn was .55 metres. There was a large quantity of ashes within, but the bones of the body were not burned. On the left of the head were ten small clay cups, each about .11 metres in height, some fragments of a metal pin overlaid with gold, and two silver earrings.

In the same trench, a little more than half a metre lower, was found a tub-shaped coffin covered with unburned bricks. These had not given way, and the interior of this coffin was almost free from dirt. In the middle of it, by the side of the bones of the skeleton, were a copper cup and a lyre-shaped silver nose-ring.

Half a metre lower than this, in a neighboring trench, was another coffin consisting of two urns, the lower of which measured .95 metres in height and .75 metres in diameter at its largest point; and the smaller .60 metres and .55 metres. One spot in the larger urn had been broken and mended with bitumen. There were two skeletons in the larger urn, their heads at the bottom, and their backbones along opposite sides. The bodies appeared to have been severed at the thighs. The two urns were plastered together with mud. A small wooden dish

was found in this coffin, but too much decayed for preservation.

In a tub-shaped coffin on another part of this hill we found the skull at the end of the coffin on one side, and the lower part of the backbone in the middle of the coffin on the other side. In this case the body seemed to have been divided not into two parts, but into three; at the neck and the thighs. About the middle of this coffin we found a copper bowl, a ring, and some beads on one side; on the other side was a green (blue) enamel plate. At the foot, the square end, was a shallow bowl with handles and two small green (blue) vases. In the earth in this coffin were fish bones and the knuckle bones of sheep. Below the body was a mat.

In a trench to the western side of the Camp Hill, some metres below the surface, and 15 metres below the highest point of the mounds, we unearthed another tub-coffin which had been covered by pieces of wood on which had rested mud bricks. The skull was at the square end of this coffin, and by the side of it were found pieces of a wooden club ferruled with copper. At the other end was an iron lance head. This body had been cut or broken. Beneath the body was a mat. There were a few ashes in this coffin.

A few of the tub-shaped coffins found in hill V yielded copper objects of a very graceful type, as shown in Plate III. Fig. 26. One of these coffins, which we found at a depth of 4 metres below the surface, had been broken and mended with bitumen. At the foot there were fragments of palm wood within, and remains of cloth about the bones. In this coffin, by the head, was a copper bowl inverted, a ladle sieve with a long, hooked handle, and a vase of graceful shape; also some fragments of a copper utensil, the use of which was not clear. By the foot was a small copper dipper with a deep pot-shaped bowl and long, hooked handle.

In the same trench, about a metre higher, in a tub-shaped coffin, were found fragments of a thin copper bowl prettily ornamented with a leaf pattern; also fragments of small copper utensils, one needle-like and one hooked. In the same coffin was a shallow, green-glazed lamp-shaped dish, with a handle rising higher than the rim. In this was a common mussel shell. Near the head of this coffin, and plainly belonging to the same burial, was a large bowl containing five little jars; one three-handled and the others two-handled; all unglazed, with whitish incrustations and black stains. In these jars were the remains of cloth which had contained some objects that had entirely disappeared.

In the same trench, 1.5 metres below this last coffin, was found another tub-shaped coffin. In this, covering the face of the skeleton, was a copper mirror. With this were six copper hoops of different sizes, bracelets, anklets, and rings; a graceful vase with a handle like a pot handle; a long-handled copper ladle; and a sieve ladle with a similar long handle; also, a small indecent clay figure with the legs drawn up. On the right side of this coffin without, level with the top and close to the head, there was a pocket-like hole in the earth, where there had been a basket turned upside down. The basket had rotted away, but the marks of its texture were still visible in the earth. In this pocket were five vases with yellow and green (blue) enamel; three slender copper bracelets; two copper pins; a copper rod with four prongs at the top; several small bone or ivory rings, colored, with flat silver rings between them; and fragments of an ivory tube, possibly a musical instrument. In this coffin there were also a quantity of rude glass beads. Judging from the pottery this may have been Cossæan. If so, then the coffin next but one preceding must belong to the same period, since the copper objects found in both are of the same pattern and manufacture.

In a neighboring trench, four metres below the surface, was found a tub-shaped coffin, cracked, and the cracks repaired with bitumen. The skull was at the head or round end of this coffin. Near it lay a graceful, ornamental, copper dish (Plate IV., Fig. 1), a broken iron dagger, a copper brooch, and a Babylonian cone cylinder. This was apparently a grave of the later Babylonian period, from 1000 to 550 B.C.

In the same trench as the last and at the same level, there was a bowl-shaped coffin; height .66 metres, diameter of opening .59 metres, diameter at broadest point .64 metres, slightly bitumened within. In this was a white enamelled vase of graceful shape, a clay bowl which had contained some liquid, and a clay dish which had contained more of the same substance. This substance had left a white incrustation on the surface of the vessels, which crumbled at the touch and adhered to the fingers like fine flour. There were other remains of food, including date kernels, a few iron nails, a fragment of a spear head, and a small nail-like copper fragment

The coffins of the shapes above described, as already stated, are Babylonian, and occur from a period about 2500 B.C. to about 500 B.C. These are only a very few among the many we found. The following notes refer to the slipper-shaped coffins of later date.

On the temple plateau, to the southeast of the ziggurat, some .85 metres below the surface, was found a plain white, slipper-shaped coffin, length 1.25 metres, .24 metres deep at the head, and .20 metres at the foot; with an opening .55 metres in length by .44 metres in breadth. In this, along with the body, were found a small clay horse and rider, the rider originally painted with red paint. These figures of horses and riders are characteristic of the Parthian period, and are not found in the earlier Persian or Babylonian levels.

In another part of the temple plateau, 1.5 metres below

the surface, was found a blue-glazed slipper-shaped coffin, with the common female ornamentation, covered with a lid. This coffin was unusually long, 2.10 metres. In it were found 123 button-like gold objects made for sewing on stuff of some description. These were distributed all over the body, and had evidently been sewed on the garment worn. There was also a large leaf of gold for covering the face; a small gold bead; two heavy gold rings, shaped like seal rings, the smaller too small to be worn by any but a child, the latter adapted to the little or, if the hand were very small, the third finger of a woman; two large elaborate gold earrings with bell pendants, in the centre of which were once pearls, and gold pendants around the sides; a fillet of gold leaf for the head; and a few ruined amber beads.

Not far from this, half a metre below the surface, was a brick tomb, built with bricks taken from some of the structures on the ziggurat. In this were the bones of several bodies; but no skeleton entire. Scattered about on the floor of the tomb were two heavy gold clasps, apparently belonging to a belt, and two other gold objects belonging to the buckles of the belt. There were also two stone beads and a silver ring in this tomb.

But the best specimens of coffins of the Seleucidan, Parthian, and Sassanian types were found on the Camp Hill (I), and here, as already stated, they were sometimes at great depths, as on this hill there was a much greater accumulation of later débris, and a later occupation than on any other. At the highest point of the hill, about eight metres below the surface, were found two white slipper-shaped coffins. One of these was very well preserved, and had been so carefully covered with an oval white lid that no earth had found its way into the coffin. Here the body was found stretched out at full length. The hair on the chin was well preserved, and there was a decidedly offensive odor from the corpse. The right

hand was stretched out by the side; the left hand lay on the body. The body was covered with wreaths of leaves of a vine-like appearance, and what looked like bunches of leaves and flowers. These latter had been tied around the head and breast. We found no other burial resembling this in the use of flowers and wreaths. I fancy that it was a Greek burial of the Seleucidan period.

At a point near the corner of the Court of Columns on this mound, we found a nest of slipper-shaped coffins, five in all, pointing in every direction, and lying at different levels; the highest about 2.5 metres below the surface. One of these was blue with female figures; the others plain white. Only one of these contained beads; the others nothing but the bodies. At the same locality, about a metre below the surface, was a slipper-shaped coffin, blue, ornamented with four heads with puffed hair, and wearing a high cap which, from the work of Loftus at Warka, I presume to be Sassanian. Close to this was a plain white coffin without ornaments. In this were found diamond-shaped pieces of gold leaf. I have already stated that, as a rule, the contents of the coffins of the Seleucidan, Parthian, and Sassanian periods were ornaments, and not implements, or utensils. In connection with the Parthian coffins we also found quantities of clay riders on horses, such as the one described above, and objects which appeared to be toys. Jars containing articles of food were also sometimes found with these coffins, but not regularly, as was the case with the older Babylonian coffins. It seemed as though the ideas connected with death, and the beyond, had undergone a change, so that men no longer made for their dead the same provision of food, weapons, and utensils for the hereafter, as had been made in the earlier times.

The best specimens of the beet-shaped coffins, that is the large bitumened water jars used as coffins (Plate VI, Fig. 9), were found on the Temple Hill near the surface.

One found on the outer wall line of the temple, sixty centimetres below the surface, lay on its side. The length of this jar was 1.19 metres, and the diameter of the opening at the mouth .30 metres. The mouthpiece had been broken off to admit of the insertion of the body of a child, and then replaced. Outside, at the foot of the jar, was found a plain clay jug, which had contained, apparently, some article of food or drink. At another point on the same outer line of walls, .85 metres below the surface, was a similar jar lying on its side. Here the mouthpiece, after being broken off to admit the body, had been joined on again with bitumen. The body appeared to have been thrust into the jar in any way.

There was no orientation in the graves of any period. I took careful notes of the direction of the heads, and from the earlier Babylonian down to the latest burials found the coffins lying indiscriminately in every direction, north, south, east and west.

In only a few cases did we find evident traces of flesh in the coffins. In some cases, chiefly in jar and urn burials, the bones only had been buried. I judge that in some cases, especially from the Seleucidan period onward, bodies were brought from a distance to be interred at Nippur, among other places in Babylonia—although Nippur was in no proper sense a necropolis—just as now they are brought down from Persia, and other regions, to Nejef and the lesser shrines, like Imam Jasim, which abound everywhere. Such bodies were brought uncoffined and provided with coffins at the place of burial. The regular coffins at the different burial places were of different patterns, and, as we have seen, the most characteristic form of ornamentation at Nippur, beginning with the Seleucidan period, was the naked woman, which gave place later to line and boss patterns.

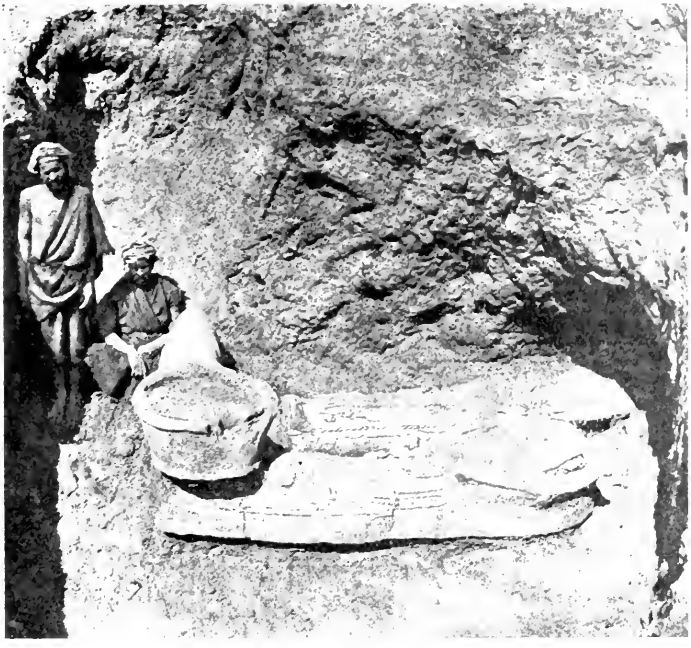
The anthropoid form of the so-called slipper-shaped coffins, which I suppose to have been introduced by

the Greeks, is presumably due to Egyptian influence. The excavations of Renan and Hamdy Bey at Sidon, showed us the manner in which Egyptian tombs were robbed to provide coffins for Sidonian kings. They also showed us followers of Alexander the Great using coffins imitating in their shape those same Egyptian anthropoidal coffins. But while these stone coffins, or sarcophagi, were anthropoidal and Egyptian within, without they were decorated in a thoroughly Greek manner, with bas-reliefs and the like. From our discoveries I should say that the Greeks of this period carried into Babylonia the use of coffins of this same anthropoidal shape, using in their manufacture the common coffin material of the country, a very thick, underbaked, and crumbly clay, which they proceeded to adorn with Greek patterns, and to ornament further in many cases by a glaze of melted glass.

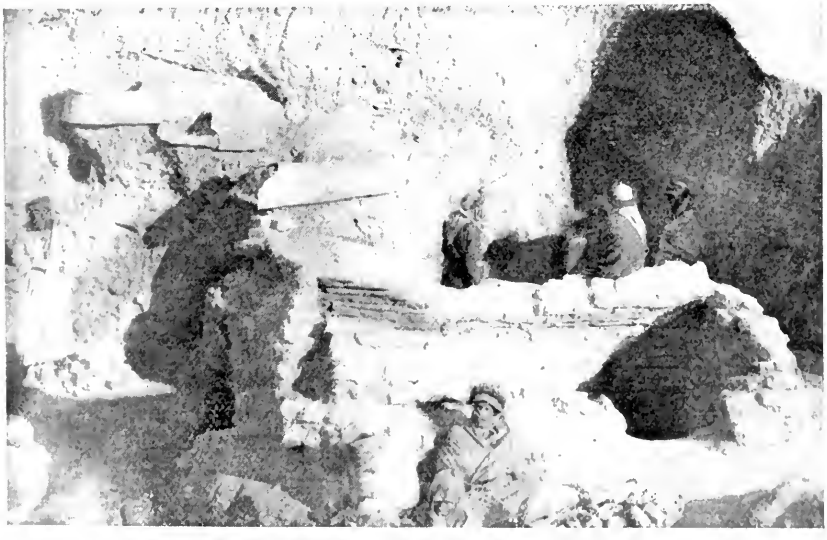
It is interesting to compare with my results from Nippur the results of the German explorations at Zerghul, or Surghul, and el-Hibba, as recorded by Koldewey in the *Zeitschrift für Assyriologie*, December, 1887. These two mounds were merely necropoleis. They lie on the south side of the Shatt-el-Haï, not far from Tello. The mound of Umm-el-Ajarib, or Aqarib, lying to the north of the Shatt-el-Haï, not far from Tello, was a necropolis of similar character, and my slight excavations at that point, described in a suceeding chapter, tend to corroborate the observations of Moritz and Koldewey. Delehem, about half-way between Nippur and Bismya seems to have been a similar necropolis, and presumably, there are other mounds of the same character in lower Babylonia.[1]

Koldewey divides the burials at Zerghul and el-Hibba into two kinds, "body-graves" (*Leichengräber*), and

[1] In the time of Alexander the Great some of these burial mounds were said to be the tombs of the Assyrian, *i. e.*, Babylonian kings, as we learn from Arrian's account of Alexander's exploration of the region south of Babylon towards the Persian Gulf.



Nest of slipper-shaped coffins, found in Hill VI.



A Nest of slipper-shaped Coffins, by western corner of Colonnade on Camp Hill, with late Brick Tomb in foreground.

"ash-graves" (*Aschengräber*). "The act of cremation began with the levelling of the place, in which the remains of previous cremations, provided such had taken place on the same spot, were pushed aside. The body was then wrapped in mats of reeds (seldom in bitumened material), laid on the ground, and covered all over with rudely formed bricks of unbaked clay, or with a layer of soft clay. This covering was quite thin in the upper parts, but thicker near the ground, so that as little resistance as possible should be offered to the heat, which attacked the body from above, at the same time that the covering retained the solidity necessary to prevent too early a collapse under the weight of the burning mass heaped upon it.

"In order to counteract the difficulties arising from the nature of the material used, the rapidly burning reeds, and the bitumen which melted and ran in burning, a sort of oven was in some cases erected. . . . In general it appears as though in the oldest period the complete incineration under an open fire was customary; while later the fencing in of the fire in ovens became more common, together with a more superficial burning, which degenerated in part into a sort of symbolism.

"The flames were not allowed to burn out, but were extinguished at the close of the incineration."

"In general it depended on the intensity of the incineration which method (body-graves or ash-graves) was chosen, since the transportation of half-burned remains to another place, or their interment in the customary receptacles for ashes was not practicable."

"A good example of a body-grave occurs in the grave of a child in one of the houses of the dead excavated at el-Hibba. The child lay with bent elbows and knees drawn up on the right side, and was covered in the manner already described with clay, which was reddened above from the fire. After the conclusion of the cremation the ashes of the fire had been manifestly brushed

aside, the pyre opened at the head end, and this opening fastened up again with damp, green-colored clay, when it was seen that the body had scarcely been injured. Finally the hummock was covered over with layers of fresh unbaked bricks, and in this way the funeral pyre formed at the same time the grave of the child.

"In another case the covering of the body, which had protected it from the immediate contact of the fire, had been entirely removed after the burning out of the funeral fire, and replaced by an oblong inverted tub," in which Koldewey sees the germ of the later coffins.

"If, on the other hand, the cremation were successful, and the body reduced to ashes or even to formless fragments," the remains were generally gathered and placed in vases or urns provided for the purpose, which were, however, too small for their intended contents. Often the ashes were merely collected in a heap and covered with a kettle-formed clay vessel. Sometimes the ashes of the body burned, together with bones of animals and date kernels, were all put in an ordinary large-bellied clay jar, covered with a mat, and buried in the ground. Sometimes the human remains were placed in a shell or goblet-shaped vessel and covered with a potsherd, while the ashes of the sacrificial victims were placed in a similar vessel by the side of this. These are the so-called "ash-graves," which were both the more common and the more ancient at Zerghul and Hibba. In the case of the rich, special houses were built to contain the ashes of the dead. These houses were laid out in streets, as in a city, and some of them were quite large and fine. The poorer persons, on the other hand, were burned in the streets or vacant places, and their urns or ashes left lying, or buried anywhere at random.

In the case of a few body burials, Koldewey notices that the skeletons were well preserved, and that there was no trace of burning. But from the analogy of the other burials, similar in other respects, he assumes that

even in these cases a formal though ineffectual cremation took place. In other cases, where there was no outward mark of burning, skeletons had been broken up and thrust into narrow-mouthed jars, which method of interment he considers as in itself an evidence that cremation had taken place. Where the body was cremated, the cremation was the act of piety, the treatment of the remains after that was of little moment comparatively, and ashes or bones might be placed in almost anything, or even be left lying where they were burned.

Koldewey notices further the objects found interred with, or by, the dead at Zerghul and el-Hibba. "With the woman were burned her ornaments; with the man his implements of warlike or peaceful employment; with the child its toys." Among the tools and weapons were found mixed together, as at Nippur, stone and copper objects. Pebbles for rubbing and pounding were common. Among the ornaments here as at Nippur bored, or otherwise worked mussel-shells (especially *mitra papalis*) were common. Clay whorls for use in spinning and weaving were also common here as at Nippur, and seal cylinders, in almost all cases destroyed by the fire, were burned with the dead. Burnt bones of animals, birds, and fishes, and burnt date-kernels found with the dead were evidence of sacrificial offerings in connection with the act of cremation. Even incense had been burned in some cases with the body.

Besides these sacrificial offerings there were buried by the dead, when the ashes or remains of the body were buried after the cremation, vessels containing food or drink. Even wells were provided in connection with the houses of the dead, these wells being made of pottery-rings in the manner described in the following chapter.

These burials at Zerghul and el-Hibba were all very early, antedating, for the most part very considerably, 2500 B.C.

Comparing the burials at these two mounds with those

unearthed by me at Nippur, which commence, as already stated, probably not earlier than about 2500 B.C., one can trace a gradual progress from cremation to interment. In the upper strata at Zerghul and el-Hibba, as shown by the German excavations, actual cremation was already giving place to a merely formal use of fire. At Nippur, even in the earliest burials, there are almost no traces of the use of fire. In the oldest burials the bodies are still thrust into narrow-mouthed jars; but these are already giving place to large-mouthed urns, and tub-shaped coffins. The inverted vessels over the burned bodies found in a few cases at Zerghul and el-Hibba, which Koldewey regards as the germ of the later coffins, we found at Nippur, in the form of large urns and tub-shaped coffins inverted over bodies, which showed, albeit, no trace of burning. In many cases the only trace of burning which we found in connection with a burial was burned date-kernels. In almost all cases, after the most diligent search, with Koldewey's admirable article in our minds, we could find no trace of burning whatsoever, but still the bodies were found broken in pieces, and thrown helter-skelter into coffins far too small for them. That even formal cremation had already been, or was rapidly being, abandoned was shown by the fact also that in so many cases the articles of food and drink which used to be buried outside of the coffins were now placed in them. Interment, and not cremation, had become the act of piety, and as the bodies were no longer destroyed by fire, there was an increasing tendency to preserve them intact, which led to an increase in the size of the coffin. So whale-back and lady-foot coffins appear, and at last come with the Greeks the slipper-shaped, anthropoidal coffins, approximately the size and shape of the human body. And yet, to the last, the old customs linger, and we find in the latest strata, bodies broken in pieces and thrust into narrow-necked jars.

CHAPTER IX.

MISCELLANEOUS.

Clay Drains—Phallic Symbols—Nail-headed Cones—Loss of Collections—Door-Sockets—Date of Camels—Stone Objects—A Jade Axe—Stone and Metal—Art of Writing—Inscription of Sargon—Pictorial Writing—Conventional Signs—Older Inscriptions—Advance in Civilization—Date and Origin of Script.

Clay Drains.—After the coffins, the most characteristic pottery remains of Babylonian mounds are the clay drains. These have been described by some former writers as wells, and according to Koldewey they actually seem to have served that purpose in the houses of the dead at Zerghul and el-Hibba, but in no case which I examined were they used as wells at Nippur, and, indeed, from their very construction, such a use seemed out of the question.

In the most primitive form of these constructions (Plate III., Fig. 27) jars were joined to one another by breaking off the bottoms. Ordinarily (Plate III., Figs. 9 and 28) pottery rings were made especially for this purpose. Sometimes these rings were perforated, as in Plate III., Fig. 9, and sometimes not perforated. There were also pieces to set on top of the drains, as in Plate VI., Fig. 4, and sometimes sieve-like stoppers with holes (Plate VI., Fig. 7). I have already in Chapter VII. stated one purpose for which these drains were used. At the top there were brick platforms, and in one case, on the northwestern nose of hill V., I found a small paved court of

brick with four of these pottery drains descending from it. Many of them descended some metres below plain level, others stopped in the débris on the hills. The oldest of these pottery drains which I found was earlier than the Sargon period, and stood below the ziggurat at its western corner, but in a much lower stratum than the earliest part of that structure. The latest, which I found on hill V., belonged to the late Babylonian or the Persian period, for, as already pointed out, these two were practically identical; tablets of Nabonidus, Xerxes, and Cambyses occurring together, and coffins with Persian cylinders and late Babylonian cylinders appearing on the same level. I found no pottery drains which appeared to belong to the Seleucidan, or Parthian periods. I found, however, surface drains of that date on the camp hills, in the Jewish town, that is, gutters which carried the water off on a slight slant, allowing it to pour down the hills and into the canals, or on to the plain.

Phallic Symbols.—M. de Sarzec discovered at Tello great quantities of objects of baked clay, like long large-headed nails, some eight or nine inches in length. The inscriptions on these were votive and dedicatory. In one wall of burned brick which I saw at Tello these nail-like objects were thrust into the bitumen mortar between the bricks. On removing the outer bricks hundreds of them were found lying in the bitumen between the bricks within. At Warka, Loftus found a wall built entirely of these curious nail-headed cones, arranged in patterns. From the discoveries at these places it was not clear what they were, nor why they should be dedicated. We found at Nippur only one or two fragments of these nail-headed cones, and those in or near the surface. One of these was uninscribed. We found, however, fragments of phalli scattered over the surface everywhere and occurring in the débris at all levels. They occurred in especially large numbers by the side of a brick wall (No. 29

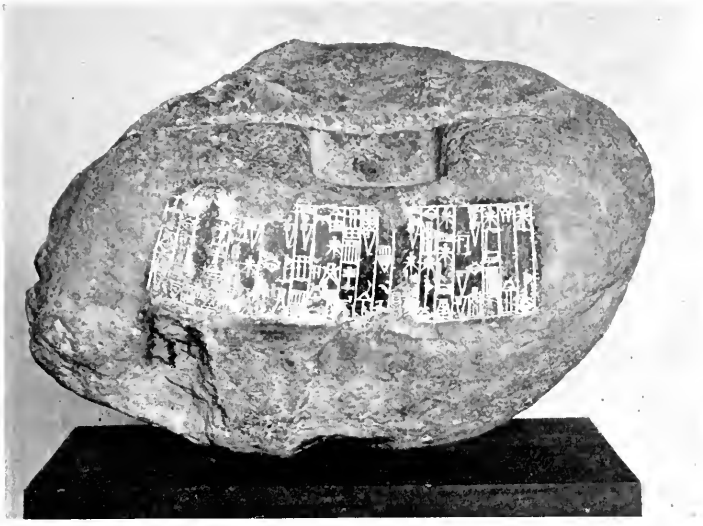
in plan of temple) near the outer northern corner of the temple. This wall was encased in an immense mass of mud bricks, like the brick tower (48). It evidently belonged to a period earlier than the last reconstruction, but the bricks, which were laid in bitumen, were unfortunately not inscribed, and the exact date I could not determine. The phalli lay along the base of this wall in such a manner that it seemed certain that they must have been pushed into the spaces between the bricks, or pressed against the wall and afterwards fallen to the ground. The phalli found here and elsewhere through the mounds were of all sizes, from a foot or more down to an inch, and of different materials, some clay, some porcelain, and some stone of various kinds, some ornamented and some plain. Some of them represented the male organ in the most completely naturalistic fashion, and others were so conventionalized that their original character was quite obscured. We made a large collection of these objects, and established a complete series from the naturalistic types backward. This series revealed beyond all doubt the meaning of the nail-headed cones, which were merely one of the more conventionalized forms of the phallic symbol.[1] A still more curious and more conventionalized form of this symbol was the door-knob form, found in the "jeweller's shop" (Plate II., Fig. 8). This I should not have recognized as having any possible connection with the phallus, had it not been for other more elongated forms which were found with these knobs, and which graded up from them to other types of our series, putting the matter beyond doubt. These phalli were connected, I suppose, at least originally, with the worship of Ishtar, and were thrust or built into

[1] The German explorers at Zerghul and el-Hibba found similar phallic emblems in those mounds, from the natural member up to the inscribed nail-headed cone, used for worship in precisely the same manner which I have described above.

walls as a votive to her. There is a passage in the epic of Gilgamesh which seems to refer to this use of the phallus in the Ishtar cult, where Gilgamesh cuts off the member of her sacred monster and casts it over the wall to her.

Unfortunately our curious and valuable collection of phalli, as well as all our sherds and fragments, were lost en route. It was impossible to make our Turkish commissioners understand the value of such collections. We made them, as it were, under protest, and carried them to Baghdad. There they had to be handed over to the provincial Government, which would neither give them to us nor forward them to Constantinople with the other objects. They were finally granted to us by the Museum, but by that time they had disappeared. Whether the Baghdad authorities had thrown them out in order to appropriate the boxes, which are very valuable there where all wood has to be imported from a great distance, and at much expense, or what became of them I do not know. But at all events, not only our valuable series of phalli, but our other series and collections of pottery markings and ornamentations and glass fragments were thus lost altogether.

Door-Sockets.—The finest inscriptions which we discovered in the Temple Hill were on stone door-sockets. The plate facing page 242 exhibits an inscribed door-socket of Sargon, 3800 B.C., and Plate I. shows a similar door-socket of Bur Sin, king of Ur, circa 2400 B.C. Both of these door-sockets are formless masses of diorite, either of them about half a camel's load. A place for the foot of the door-post was hollowed out in the face of the stone, and in this turned a wooden post shod with copper, as is shown by the remains of copper in the sockets of several of the door-posts. Both of these diorite door-sockets were brought from Sinai, and judging from their size they were carried on the backs of camels. Each of these makes half a camel's load, and the same is true of



Door Socket of Gimil-Sin of Ur, circa 2400 B.C. Brought from Mughair.

Votive nail-headed Clay Cones of Gudea and Ur-Bau Patesis of Lagash. Brought from Tello.

the door-socket of Gimil-Sin from Ur (see plate facing page 238), and of most, if not all, of the other diorite door-sockets found by us. They were much too heavy for donkeys, mules, or horses, as I found from sad experience, but well adapted to transport by camels. This suggests the use of the camel in that region at an earlier period than hitherto supposed, since one of these blocks bears an inscription of Lugal-kigub-nidudu, 4000 B.C., or earlier.

Other door-sockets of the Cossæan period were of white stone from the Persian hills, and gypsum from the neighboring Arabian plateau, or, more probably, from the country northward toward Assyria. Occasionally door-sockets were made of baked bricks, and we found in one place a large brick of Ishme-Dagan of Isin used for this purpose. Stone was precious in Babylonia, and these rough, unworked blocks of stone, which look to us so formless and ugly, were evidently, from the careful inscriptions cut on them, highly prized; so that the king who presented to the temple a door-socket, or even a rough block of stone from Sinai or the Persian mountains was thought to have made a valuable gift. So it was that Lugal-kigub-nidudu inscribed his name on a number of rough blocks of stone which he presented to the temple of Bel, two of which were later used as door-sockets and re-inscribed by Sargon and Bur-Sin of Ur, respectively.

The doors, as shown from the remains which we found, were made of palm-wood and tamarisk, with occasionally poplar or mulberry, like the doors still used in Irak today. We found no evidence of doors plated with copper plates, such as we read of in the Bible, or such as Rassam found at Balawat in Assyria.

Stone Objects.—Stone vases were found mainly in the older period. Lugal-zaggisi of Erech, Lugal-kigub-nidudu of Ur, Alusharshid of Kish, and a patesi of

Lagash of the pre-Sargonid period, dedicated a large number of stone vases and mortars in the temple. A large number more were dedicated in the period about 2500 B.C., by kings of Ur. Almost all of these were inscribed. In the Cossæan period we found plenty of stone objects, especially in lapis lazuli, agate, malachite, etc., brought from Persia and parts beyond, but nothing in the way of vases. In the Seleucidan period and later we found uninscribed alabaster vases of the shape known as tear bottles. I have already referred to the fragments of statuary found here and there. These belonged to the third millennium B.C.

We found one or two silversmith's moulds, one of them from the middle Babylonian period, made in alabaster, and various other worked stone utensils. There were also great numbers of millstones in all strata. These were brought then, as now, from the regions of the Euphrates and Tigris, northward of Babylonia. But more numerous than these were the unworked, or practically unworked, pebbles of all sorts. These were found at all depths and from all regions, used as pounders, knife-sharpeners, hammers, and the like. All had been imported, because there are no stones whatever in the country. One pebble found in the débris on the Temple Hill bore what looked like an inscription in unknown characters. We found, however, no stone age of implements, nor any copper or iron age. On the surface of the mounds were immense quantities of flint chips, arrowheads, spear-points, and the like. Similar flint implements seem to occur in greater or less numbers in all Babylonian mounds, Nippur included, from the very earliest strata, down actually to the present day.

As already stated, below the ziggurat, at its western corner and two metres below plain level, I found a beautiful, highly-polished jade axe, or adze, the only object of the sort found anywhere in the mounds. But through

the lowest strata which we unearthed, side by side with stone hammers, pounding stones, and the like, were copper and iron implements. The former metal was more freely used than the latter, it is true, and used for purposes for which we now use the harder metal, but, so far as my observations went, the use of iron was known from the earliest date to which we have been able to trace the civilization of Nippur.

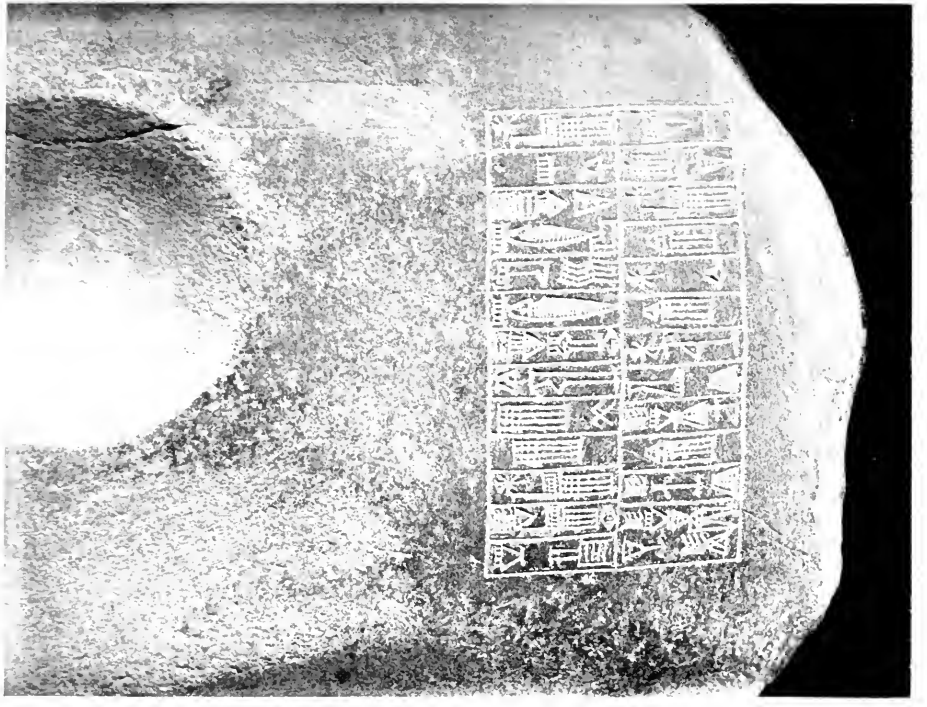
The Art of Writing.—The inscription on the door-socket of Sargon (page 242) shows that in his time, 3800 B.C., the art of writing was already highly advanced. The first sign on the upper left hand corner of the left hand column, a star, indicates heaven, or God. This is manifestly pictorial in origin. The third sign on the same line means a house, and represents either the lines of the mud bricks which constitute the walls of Babylonian houses, or the mats of which still more primitive dwellings were constructed. It has been, however, so far conventionalized that the scribe no longer feels it a necessity to carry the perpendicular lines over the whole surface to indicate the outlines of the bricks or mats at all points. The long sign, the first in the fourth line of the same column, means king. This is the figure, or rude outline of the figure, of a man lying flat on his back, with a sign resembling a crown at his head. This crown-like sign is a conventional emblem for great or large, and may be prefixed, added to, or inserted in almost any sign to differentiate its meaning. The figure of the man is swathed or mummified in its outlines, but one sees clearly the outline of the body lying on its back, with a depression just below the head. But while clearly pictorial in origin, this sign is already highly conventionalized. There are in the inscriptions of Sargon's time, or later, several other characters whose pictorial origin can readily be discerned, but of the greater part of the signs in use at that time it is impossible to say from their form what

their origin is. They have been so far conventionalized that the original picture character is entirely lost. Indeed, some of them are composite, and others are marked with signs of differentiation of an abstract character. It is clear that the art of writing had had a very long history before it reached the point shown by this inscription of Sargon.

The inscriptions of Lugal-kigub-nidudu and Lugal-zaggisi are somewhat more primitive in character. By a study of these and some of the most ancient inscriptions found by the French at Tello, Professor Friedrich Delitzsch[1] has been able to trace back a large number of the four hundred signs used in the Babylonian cuneiform script to their origins. He shows what I have already stated, that behind the earliest cuneiform script lies a picture writing; and by means chiefly of the extremely archaic inscriptions published by Hilprecht in his *Old Babylonian Inscriptions*, he identifies about forty pictures, most of which had not been identified before. These are in general simple objects, like sun, eye, tongue, hand, foot, grain, arrow, etc. The signs for man and woman, which are pictures of the male and female organs respectively, are illustrative of the stage of culture in which this form of writing originated.

But in the earliest inscriptions which we yet possess these simple picture signs, which are already themselves much conventionalized in form, possess secondary or derived meanings, so that the picture of the foot means "go," or "stand"; of the tongue "speak"; of the eye "see"; of the arrow "divide," etc. Moreover, the signs are already joined one to another, doubled, and variously modified to produce a large number of very complicated characters. There are also some conventional signs which are attached to or inserted in other

[1] Die Entstehung des ältesten Schriftsystems oder Der Ursprung der Keilschriftzeichen; dargelegt von Friedrich Delitzsch.



Door Socket of Sargon, 3800 B.C.

signs, whether simple or complex, to modify their meaning, the most common of these being the sign meaning "great."

There is, in other words, a considerable advance from the time of Lugal-zaggisi to that of Sargon, since it is possible in the inscriptions of the former to recognize the picture character of many signs which can no longer be identified in the latter. How long a time was required to effect such a change? Was it one hundred, or two hundred, or seven hundred years? That we are unable to determine from the forms of the characters only, since progress in such matters is not merely a matter of years, but of circumstances and conditions also.

But while there is considerable progress between the time of Lugal-zaggisi and Sargon in the outward forms of the characters, there is none in the principle of their use. The earliest inscriptions yet found show us, as already stated, the age of pictures long since passed, and a complicated system of writing already invented and even applied for an indefinite period. The difference between the inscriptions of Sargon and Lugal-zaggisi is as nothing compared with the difference between the inscriptions of Lugal-zaggisi and the first invention of writing.

Shall we ever find anything closer to the sources than we have yet found? That remains for future excavations to determine, but the indications seem to favor such discoveries. I have already pointed out that at a depth much lower than that at which I found my few, and Haynes his very many, extremely archaic inscriptions of Lugal-kigub-nidudu, Lugal-zaggisi, and the like, four metres below the Sargon level, and about three to four metres above virgin soil, under the western corner of the ziggurat, along with a jade axe, I found an inscribed tablet.[1] It is not, of course, always safe to conclude that a

[1] Since writing the above I have ascertained that Haynes found one or more clay tablets thirteen feet below Sargon level which would be at about

tablet, or tablet fragment, belongs in age to the stratum in which it is found, and until more tablets than this one have been found at this same low level, it will remain a possibility that there was "leakage" from above at this point. This "find" suggests, however, that writing on clay tablets was practised in Babylonia long before the time of Lugal-zaggisi, it may be as early as 5000 or even 6000 B.C.

the same level at which I found this tablet, described by me in a previous chapter as the earliest inscribed object yet found. This "find" of Haynes confirms what I have said above as to the extremely early use of clay for writing purposes, antedating stone. As to the date of these tablets, it should be remembered that as yet all these very early dates are conjectural. Admitting even that Sargon's date is thoroughly established, everything before that must be conjectured from estimates of the time during which a certain amount of débris could accumulate, etc. While I believe that the figures given in the text are very conservative, I still wish to warn the reader that they must as yet be regarded as conjectural.

CHAPTER X.

HISTORY OF NIPPUR.

Nature's Kindergarten—Birthplace of Civilization—The Land of Kengi—The Kingdom of Kish—The Land of the Bow—Erech and its Empire—Supremacy of Ur—Art of Lagash—Religious Supremacy of Nippur—Nippur in the Creation Tablet—The Elamites—Alusharshid the Deliverer—Sargon of Agane and his Empire—Constructions of Naram-Sin—Second Kingdom of Ur—Hegemony of Isin—Third Kingdom of Ur—The Elamite Conquest—A Tablet with a History—Erech and the Gilgamesh Epic—Abraham and the Elamites—Babylonian Supremacy—E-kur destroyed—Babylonians the Destroyers—The Cossæans—Restoration of E-kur—Foreign Relations of Babylonia—The Second Destruction of E-kur—Assyrian Conquest—Ashurbanipal Rebuilds E-kur—Fall of Nineveh—Final Destruction of E-kur—A New Faith—Persians and Greeks—Cessation of Inscriptions—Parthians and Sassanians—Jews and Christians—Arab Conquest—The Abbassides—Turkish Misrule.

I HAVE already described the Babylonian plain formed by the alluvial deposit of the two great rivers, the Tigris and the Euphrates, bounded by the Persian mountains on the east, and the Arabian plateau on the west and north. It was originally a narrow gulf of the sea, surrounded by rocky shores, which was filled up by mud brought down by those two rivers, together with the Karun, which unites with them near the point where they empty into the Persian Gulf. This alluvial deposit is fine mud, containing no stones whatever, and is almost incredibly fertile when irrigated. Here was one of the primeval sites of civilization, in which Dame Nature seemed to have provided, as it were, a kindergar-

ten for her children. Wheat and the palm were native there, and furnished food of the highest nourishing quality without effort. It was not a forest country, and there were neither wood nor stone with which to build, but the marshes furnished reeds and the palms mats, and nature herself showed men how to make bricks and to form mud into pots and dishes, and finally into higher plastic forms.

Babylonia is one of the places where civilization and culture originated, and especially it was the birthplace of that civilization to which we have fallen heir. In another chapter I have pointed out that the indications of tradition and of burial customs point to that portion of this plain between Ur and Eridu on the southward, and Nippur on the northward, as the original home of civilization and culture, and that the indications of the discoveries at Nippur, as well as of the geology of the country, suggest that the settlement of these great cities was made not later than 6000 or 7000 B.C. At that remote period men inhabited this country sufficiently advanced in civilization to found cities, build houses, make pottery, and, in general, carry on the industries of settled and civilized life.

The earliest inscriptions worth the name which we possess belong to a period probably about or a little before 4000 B.C. At that time lower Babylonia is known as Kengi, which, according to Professor Hilprecht, means "land of the canals and reeds." These inscriptions belong to kings the reading of whose names is uncertain, but whose seat of power was manifestly in the south. Through them we learn that Erech, Lagash, or Sirpurla, Eridu, Ur, Isin, Larsam, and, above all, Nippur, were important cities at that early period, and that Nippur was the religious centre of the country. At the earliest date to which the inscriptions carry us back, Kengi had already a strong rival to the northward,—the

city of Kish; and the earliest records which we possess recount the contests between kings of Kish and of the "Land of the Bow," and kings of the southland. Among these the most important, and one of the earliest yet discovered, is a long inscription of a certain Lugal-zaggisi, high priest of the "Land of the Bow," who conquered Kengi and established the seat of his supremacy at Erech. With much toil and infinite patience Professor Hilprecht restored this inscription from fragments of over a hundred vases dedicated by this king to En-lil, and deposited in the temple at Nippur; of which a very few were discovered by me, but by far the larger part by Haynes in his later excavations. In this inscription Lugal-zaggisi describes himself as "King of Erech, king of all the world, prophet of Anu, hero of Nidaba, son of Ukush, patesi (High Priest) of the Land of the Bow." But the most interesting and important part of the inscription is that in which he describes his conquests, and his dominion: "When En-lil, lord of lands, invested Lugal-zaggisi with the kingdom of the world and granted him success before the world; when he filled all lands with his renown, and subdued them from the rising of the sun to the setting of the sun; at that time he made straight his path from the lower sea of the Tigris and Euphrates to the upper sea, and granted him dominion from the rising of the sun to the setting of the sun, and caused all countries to dwell in peace."

According to this inscription, at a period antedating, apparently, 4000 B.C., a great empire had been established stretching from the Persian Gulf to the Mediterranean Sea, with Erech in Southern Babylonia for its centre. The fact that such an empire could be established is presumptive evidence of a fair degree of civilization in that extremely early period, not only in Babylonia, but through all hither Asia.

Another king of these early times is Lugal-kigub-

nidudu. That he antedated Sargon is proved by the fact that on one of the door-sockets of Sargon, found in place by me in the temple of Bel at Nippur, there was an earlier inscription of Lugal-kigub-nidudu. He seems to have reigned a little later than Lugal-zaggisi, and to have had Ur as the seat of his kingdom, although recognizing Erech as a second capital of almost equal importance. So we read in one of his inscriptions that "he added lordship to kingdom, establishing Erech as the seat of lordship, and Ur as the seat of kingdom." I have already referred to the fact that this king dedicated in the temple of Bel at Nippur a number of rough blocks of diorite and marble, inscribed with his name and a votive inscription to En-lil, some of which were later re-inscribed and re-dedicated by other kings. He also dedicated vases to En-lil and Nin-lil, his divine spouse, a few poor fragments of which were found by me, and many more by Haynes.

Shortly after his time, Lagash, or Sirpurla, appears to have acquired the hegemony; and among the earliest and most interesting inscriptions from Tello is the so-called stele of vultures, discovered by de Sarzec at Tello, which Edingiranagin set up to commemorate a victory over the people of Kish and of the "Land of the Bow." From the beginning of our acquaintance with Lagash it seems to have been a centre of art development; and whereas we have from Nippur at this early period nothing but inscriptions and perhaps a rude incised tablet or two,—votives to En-lil,—we have from Lagash the rude but forceful stele of vultures, representing in one compartment, on top of one another and without perspective, the corpses of the enemy lying on the field of battle, with vultures hovering above them, and in another compartment the captives, apparently about to be offered as a sacrifice to the gods of Lagash; and also two statues of stone from Sinai, dedicated to his god by Ur-nina.

It is interesting to note that through this period, while Kengi, Kish, the "Land of the Bow," Erech, and Ur are struggling for supremacy, Nippur plays no role politically, but its temple is honored by the kings of all these places alike, and its god, En-lil, recognized apparently as supreme lord. From the first king whose name has yet been found, En-sag-ana, "Lord of Kengi," who conquered Kish, "the wicked," all these kings dedicate votive offerings, often part of their spoil, to En-lil, the Bel of Nippur, and several of them assume the title of patesi, or over-priest, of En-lil. Nippur evidently enjoyed from the most remote period a peculiar position as the original religious centre of the country, although how she won it and what was her relation to the civilization of Babylonia we cannot yet determine further. That Nippur was older than the earliest inscriptions here discussed, probably by two thousand years or so, has already been shown. In the, as yet, undiscovered records of that earlier period lies hidden, presumably, the explanation of her acknowledged position of religious supremacy.

A tablet found by Hormuzd Rassam at Abu Habba (Sippara), in 1881–82, containing the story of creation, is sometimes quoted as showing the Babylonian tradition that Nippur was the oldest of all cities, followed closely in antiquity by Erech and Eridu. This has been translated by Pinches in *Records of the Past*, as follows:

"Incantation: The glorious house, the house of the gods, in a glorious place had not been made,

"A plant had not been brought forth, a tree had not been created,

"A brick had not been laid, a beam had not been shaped,

"A house had not been built, a city had not been constructed,

"A city had not been made, the foundation had not been made glorious;

" Niffer had not been built, E-kura had not been constructed;

" Erech had not been built, E-ana [the temple of Ishtar, at Erech] had not been constructed;

" The Abyss had not been made, Eridu had not been constructed."

This seems to show that Babylonian tradition recognized these three cities, Nippur, Erech, and Eridu, as the primal seats of Babylonian religion, but I do not think that we can argue from this that Nippur, as a city, necessarily antedates the other great cities of the south. It is singular, by the way, that the name of Ur is omitted in this inscription.

As we have already seen, while Kish and the " Land of the Bow " were frequently politically hostile to Kengi and the cities of the south, and the history of their relations to one another is one of war and of mutual conquest, yet in point of religion both seem to have been akin; or at least the inscriptions found at Nippur show us that the kings of all these places, without distinction, worshipped En-lil in his temple of E-kur, and offered votives there. There was, however, another foe who in plundering the land robbed the temples and carried away their spoils,— namely, the Elamites, over the mountains toward the southeast. From a very early time the Elamites were wont to descend upon the Babylonian plain, to harry, plunder, and destroy; and sometimes to make more permanent conquests. We cannot, indeed, say certainly that they ever sacked the temple of Bel at Nippur, and it may be that the peculiar sanctity of the place, as a religious centre merely, possessing little or no political importance, may have saved it from destruction by them. We know, however, that other temples, notably E-ana at Erech, were sacked by them, and at least their kings did not recognize the temple of E-kur by votive offerings. But if the Elamites did not worship at Babylonian shrines,

they were at least no barbarians, but possessed a civilization almost, if not quite, equal to that of Babylonia.

Some time, not long before 3800 B.C., when the cities of southern Babylonia were apparently weakened by the attacks of the Elamites, or even reduced to some sort of subjection to them, Alusharshid, king of Kish, overran and annexed the whole country, as far south certainly as Lagash, where his inscriptions have been found. An inscription of his on a vase excavated by me at Nippur, one of many dedicated by this monarch, suggests that he came as a deliverer of the country from the Elamites, for in it he says that he dedicates this vase "out of the spoils of Elam and Bara'se." A similar statement is found on the objects dedicated by him at Lagash.

The next name which we meet is that of the famous Sargon, or Sargina; or, to give him his full name, Shargani-shar-ali, son of Itti, king of Agane, or Akkad, in northern Babylonia. His special home-god seems to have been Shamash, but he also honored the shrines of Nippur and Lagash, particularly the former, with votive offerings, and in fact he rebuilt the ancient temple of E-kur. I have explained elsewhere the grounds on which his date has been fixed at 3800 B.C., and the dependence of all earlier dates in our Babylonian chronology on this date. I have also called attention to the peculiar importance of Sargon in Babylonian history, not only because of the great extent of his empire, which included in addition to the regions claimed by Lugal-zaggisi,—namely, Babylonia, Mesopotamia, and Syria,—Elam, Cyprus, Palestine, and Northern Arabia, with the peninsula of Sinai, but still more because of his administrative, scientific, and literary activities. He may fairly be called the Charlemagne of Babylonian history, since he played for science, literature, and organization in Babylonia much the same part which the great Charles did 4600 years later in western Europe.

Sargon was succeeded by his son Naram-Sin, who also honored the shrines of the south, erecting a great wall at Nippur, and restoring or rebuilding E-kur, the temple of En-lil. After him there is a gap of almost a thousand years, of which we know as yet practically nothing. A few names meet us from the inscriptions, but we cannot arrange them in chronological order, nor give a consecutive history of the period. To this time seems to belong, among others, Entemena, patesi of Lagash, some fragments of whose votive offerings I found in the temple at Nippur.

About 2800 or 2900 B.C., we find the city of Ur exercising a hegemony over all of southern Babylonia, and the kings of that city styling themselves princes of Eridu, Erech, Nippur, and Isin. Ur-Gur is the first king of this dynasty of whom we have any knowledge. He was a great builder, the greatest of Babylonian builders before Nebuchadrezzar II. of Babylon. To him belong the earliest ziggurats yet explored, those at Nippur and Mughair. It is possible that he introduced this form of construction of conventional mountains on the summits of which the gods might dwell. Professor Sayce has called attention to the proximity and apparently close relationship of Ur to Arabia; and I have noted elsewhere that the only other place beside Babylonia and Assyria in which, as far as we now know, ziggurats have been used, is southern Arabia.[1] Ur-Gur entirely rebuilt the temple of Bel at Nippur, razing, in order to do so, the structures of his predecessors, and building on their ruins. Whether or not he was the first king to build a ziggurat there, at least he completely altered the form and arrangements of the temple, giving it that general shape which it retained for the next two thousand years, until after the time of Ashurbanipal. One characteristic feature of Ur-Gur's constructions is a considerable use of

[1] The inscriptions of Ashurbanipal speak of a ziggurat also in the Elamite temple at Susa.

baked brick, the wood for baking which must have been brought from other countries, since there is practically none in Babylonia. From objects found we know also that in his time there was a widespread commerce with India, and apparently also with points of Asia farther east, as well as with the regions westward,—as far at least as the islands of the Mediterranean Sea. He was succeeded by his son, Dungi, inscriptions by whom were found at Nippur.

It is at this period that Lagash, or Sirpurla, again comes into prominence as an art centre under its patesi, or over-priest and ruler, Gudea, a vassal of Ur. Apparently there was close intercourse with Egypt in those days, and the art of Lagash was strongly influenced by the traditions of the Nile; at least so one feels in studying the diorite statues dedicated by Gudea. It has already been stated that works of art were created at Lagash at a much earlier period. Gudea revived the old traditions, and under him art reached a far higher development than it ever reached in Babylonia before or since, to the best of our present knowledge. The best work was done at Lagash, then insignificant politically, but still important from the wealth and prestige of its temple, and the influence of the artists of Lagash was felt through all southern Babylonia for half a millennium, or until the time of the Elamite conquest.

Among other places, Nippur felt this artistic impetus, and I found fragments of statues and bas reliefs of the Lagash school of art, while Haynes found later a part of an inscribed statue. The greater part of the remains of this description found at Nippur belong, however, to the period of a later dynasty of Ur, about 2500 or 2400 B.C.

After the two kings of the Ur-Gur dynasty of Ur there follows a period of uncertain duration, of which we know nothing. Then Isin emerges as the leading state in

southern Babylonia, presumably about 2600 B.C. The inscriptions of three kings of this city,—Ur-Ninib, Bur-Sin, and Ishme-Dagan,—I found at Nippur, but no one of them seemed to have built very largely there. Then comes, it is supposed, another period of the supremacy of Ur, presumably about 2500 or 2400 B.C. Three kings of this dynasty are known to us from the inscriptions found at Nippur, namely, Ine-Sin, Bur-Sin, and Gimil-Sin. I found large numbers of tablets from the reigns of all these kings. Bur-Sin, especially, had done a great deal for the temple of Bel, building, among other things, a shrine before the gate, and repairing the great ziggurat. The kings of this dynasty were evidently powerful, and a tablet found at Nippur shows that Gimil-Sin conquered the Lebanon, or part of it; while Ine-Sin was over-lord of Syria and conducted campaigns in Phœnicia. The Babylonian names of sacred sites in Palestine and the surrounding regions, such as Sinai (place of the Moon God, Sin), Mount Nebo, Anathoth, and so forth, testify to an early connection between Babylonia and Palestine; and the more we learn of early Babylonian history the more ancient and the closer does that connection seem to have been.

Following the Ine-Sin dynasty of Ur, Larsam, near Erech, seems to have acquired the supremacy for a brief period under an Elamite dynasty, one king of which was Eriaku, who styles himself "Shepherd of the land of Nippur, the executor of the oracle of the holy tree of Eridu, shepherd of Ur, king of Larsa, king of Sumer and Akkade." The Elamites, those ancestral foes of the Babylonians, had again invaded the country. This time they seem to have made a more permanent conquest than they had ever done before, and to have established a ruling dynasty, with Larsa as its capital, but to the last they remained hated foreigners and oppressors. As always before, they plundered the temples of Babylonia

ruthlessly. We found in the "jeweller's shop" at Nippur, as already narrated, a curious evidence of this in a small agate object inscribed on one side by the patesi of some unknown city with a dedication to Ishtar, "for the life of Dungi, the powerful champion, king of Ur," and on the other side inscribed thus: "Kurigalzu, king of Karduniash, conquered the palace of Susa in Elam, and presented this tablet to Belit, his mistress, for his life." That is, this tablet had been offered in the temple of Ishtar at Erech, presumably as a votive offering, in the time of Dungi, about 2750 B.C., carried to Susa by the Elamites four hundred and fifty years later, and offered as a part of their spoils in the temple there; carried off again by Kurigalzu, when he conquered Elam a thousand years after that, re-inscribed by him and dedicated out of the spoils of his conquests in his favorite temple of Bel at Nippur. The Assyrian king, Ashurbanipal, gives us a date for the Elamite rule in the account of his eighth campaign against Ummanaldas, king of Elam. He tells us that sixteen hundred and thirty-five years before Kudur-Nankhundi, king of Elam, laid hands on the temples of Akkad and carried the image of the goddess Nana into Elam. This image he recovered and brought back to Erech. The particular action of Kudur-Nankhundi here referred to took place, according to this, in the year 2294 B.C. But how long before this the Elamite oppression began, or how long after this it lasted we do not yet know.

Erech seems to have suffered greatly from the oppression of the Elamites, and, according to its own literature, to have played an important part in the struggles of the Babylonians for freedom; if, at least, the struggle against the Elamites referred to in the Gilgamesh epic belongs to this, and not to some earlier period. That epic has come down to us in the form in which it was preserved in Ashurbanipal's library in Nineveh; but Ashurbanipal's

text was a copy of the version contained in the temple library at Erech, so that in point of fact the only version of the epic which we now possess is the Erech version. In that version a historical event, the struggle for freedom from the Elamite yoke, in which struggle Gilgamesh is represented as leading the people of Erech in a successful war for independence, is combined with the ancient myth in a manner which reminds one of a Burgundian version of the Nibelungen-Lied, in which authentic events of Burgundian history are woven into the old Teutonic myth. But whether the historical events narrated in the Gilgamesh epic belong to this or some earlier struggle to shake off the Elamite yoke, at least we find here valuable information about the spirit in which these wars were waged. From other sources we learn that Erech was finally conquered by Eriaku, of the Elamite dynasty of Larsa, and that it was in fact the centre for a long time of Babylonian resistance to the Elamites.

It was apparently during this period of Elamite supremacy that, according to Hebrew tradition, Abraham, the ancestor of their race, immigrated into Canaan, and the fourteenth chapter of Genesis gives us a glimpse of the condition of Babylonia in that period from an outside standpoint. In that chapter we are told of an expedition which Amraphel, king of Shinar, Arioch, king of Ellasar, Chedorlaomer, king of Elam, and Tidal, king of Goiim conducted against the west land, and particularly the cities of the Jordan valley. Goiim seems to be Gutium, often mentioned in the Babylonian inscriptions. Chedorlaomer is Kudur-Lagomar ; Arioch, king of Ellasar, is Eriaku, king of Larsa; and Amraphel, king of Shinar, appears to be Hammurabi, king of Babylon.

I have dwelt thus at length upon the Elamite oppression and the war of independence, because of the fateful issue of the struggle for Nippur and its famous temple. The Elamites were finally driven out, after a long and

desperate contest, by Hammurabi, once their vassal and ally, as it would seem. He established a new empire with Babylon as its capital. To strengthen his government he sought to make Babylon not only the political, but also the religious centre of his kingdom, and to transfer the allegiance and the offerings of the people from En-lil, the Bel of Nippur, or the older Bel, to the younger Bel, Bel Marduk of Babylon. The issue of the war was, therefore, disastrous to Nippur. Its temple was sacked, its statuary and rich votive gifts wantonly destroyed, and all the power of the new empire was used to destroy the prestige of E-kur, in order to enhance the prestige of its rival Esagila, the temple of Bel Marduk at Babylon. I found hundreds of fragments of vases, statuary, and other objects of stone, the gifts of sixty generations and more, scattered about in the temple, which had been destroyed at this time. In one place particularly, a sort of cellar, just within and below the second wall of the temple on the southeast, where I found the three rough blocks of Lugal-kigub-nidudu, vases and other similar objects had been literally pounded to pieces. Apparently there had been some sort of a depository of temple treasures at this point, the treasury had been opened, the gifts taken out, and the inscribed stone objects dashed to pieces then and there; while gold and silver objects, and all things that could be employed for profane purposes were carried away. At the same time the houses on hill X., described in Chapter VI., in which we found tablets and temple records of the time of Ine-Sin, Bur-Sin, and Gimil-Sin, of Ur, were burned.

Hilprecht, in his *Old Babylonian Inscriptions*, suggests that this destruction was wrought by the Elamites. This seems to me improbable, for three reasons: in the first place, while we know that the Elamites carried off the treasures of E-ana, the temple of Ishtar at Erech, because we learn of the recovery of the spoils of that temple from

Susa at later periods, we hear nothing of any spoils of Nippur in Susa. Both Kurigalzu and Ashurbanipal were ardent devotees of Bel of Nippur. If either of these monarchs had found anything belonging to the temple of E-kur, in Susa, when they captured that city, it seems likely that they would have restored it to its ancient home. We know that both of them found and carried away from Susa objects belonging to the temple of Ishtar at Erech, but we do not hear that they discovered anything from Nippur there. In the second place, those who destroyed the votive objects at Nippur were bent, not on plundering from a foreign god to enrich their own god, as the Elamites seem to have been, but on desecration and annihilation merely. In the third place, it seems clear that on two later occasions, as we shall see presently, the Babylonians destroyed E-kur and its treasures. I am inclined to think, therefore, that on this occasion also, the destruction was the work of Babylon, and that the temple of Bel at Nippur was desecrated and destroyed in the interests of the temple of the younger and rival Bel of Babylon.

But, however this may be, it is at least a fact that with the establishment of the new kingdom of Hammurabi, with Babylon as its capital, the temple of E-kur ceases to be the religious centre of the Babylonian religion. For eight hundred years (if we reckon Hammurabi's date at 2250 B.C.) we find no trace of any reconstruction of the ancient ziggurat. No bricks have been found bearing the inscriptions of any king of Babylon during that long period, nor any fragments of vases or votive offerings dedicated by them to En-lil, the Bel of Nippur. We have, it is true, an abundance of documents, contracts, deeds, and the like, dated in the reigns of these kings, but none of these were found in the temple precincts; and if the temple still continued to exist as such during this period, as I presume it did, at least it

played a very secondary part in the religious life of the people.

Finally, the Babylonian power became corrupt. The ever hostile Elamites invaded and overran the country from the south, and the new power of Assyria began to press upon it from the north. At last the Cossæans, or Cassites, from the mountains to the east of Babylonia, taking advantage of the weakness and disruption of the empire, invaded the country, conquered it, drove out the Elamites, and set up a new empire. Almost all that we know of the kings of this Cossæan dynasty, which ruled for over three hundred years, has been learned from their inscriptions and archives found at Nippur. Nominally, Babylon was their capital, but for reasons which we do not yet know, they restored to Nippur its ancient religious primacy, worshipping En-lil, the Bel of Nippur, instead of Marduk, the Bel of Babylon. One of the kings of this dynasty, Kurigalzu,[1] rebuilt the ziggurat, which had fallen into a deplorable condition of decay; and votive offerings of nine or ten kings of this line were found among the temple treasures. One of these kings built the great structure containing the Court of Columns on hill I., and both on that hill, and also on hills IX. and X.,—that is practically over the whole of that portion of the mounds lying to the northwest of the Shatt-en-Nil—I found archives of the Cossæan kings, relating to the affairs of the temple of Bel. During their time the prestige and wealth of Bel and his city of Nippur were vastly increased. The Tel-el-Amarna tablets, found in Egypt, belong to this period. These show us that Babylonian was at that time the language of commercial and political intercourse throughout the whole civilized world. The Cossæan kings exchanged presents and established a

[1] There are two kings of this name, Kurigalzu, the father of Burna-Buriash, who reigned 1372–1348, and Kurigalzu, son of Burna-Buriash, 1306–1284.

matrimonial alliance with Egypt, and they had commercial relations, as we know from the objects found among their treasures, with Greece on the west and China on the east. A votive object dedicated by Kurigalzu throws a curious light on the relations of Erech and Nippur at this period, and suggests an earlier religious rivalry between the two at the time of the Elamite conquest, about 2300 B.C. This is the heart-shaped agate object, already described, with an inscription for Dungi on one side, and an inscription of Kurigalzu on the other. This was originally dedicated in the temple of Ishtar at Erech, and carried off from there by the Elamites. When Kurigalzu captured Susa he restored this votive object, not to Erech, but to Nippur, and re-dedicated it to Beltis of Nippur, apparently emphasizing by this act a hostility between the two temples.

As already stated, this period of the revival of the religious supremacy of Nippur lasted until the middle or end of the twelfth century B.C. Then the Cossæans were, in their turn, overthrown by Nebuchadrezzar I., the founder of the native Pashe dynasty, and the seat of religious, as of political, supremacy was again transferred to Babylon. Once more the temple of the ancient Bel of Nippur was sacked, and its treasures destroyed. The great buildings on the northwest side of the Shatt-en-Nil were burned to the ground, but, luckily for us, this did not destroy the tablet archives contained in them. Fortunately, also, in the destruction of the temple itself, a part of the temple treasures was buried beneath the roofs and walls of the buildings, and preserved almost unharmed in the earth, to be unearthed by us.

The next three and a half centuries are a blank in the history of the temple of Bel at Nippur. None of the Babylonian kings repaired it or offered votives there.[1]

[1] It is possible that there was one exception to this rule. One inscribed fragment of brick which I found in the temple may have belonged to Marduk-nadin-akhe, 1116 B.C.

The records of this period which I found at Nippur were in the shape of contract tablets and deeds, not a few of these bearing Aramæan dockets, and all found in hills V. and X. One mark of the decadence of Babylonian influence is these very Aramæan dockets scratched on the sides and ends of contract tablets, for convenience of reference and identification. They showed that Babylonian had yielded place to Aramæan as the world language, the language of political and commercial intercourse.

During this period, while the power and influence of Babylonia were on the wane, the power of Assyria was waxing ever greater. At length, in the middle of the eighth century B.C., Babylonia was definitively conquered and annexed to the Assyrian empire. But the Babylonians were restive. Over and over again they broke out in revolt against the kings of Nineveh. As a method of checking the influence of Babylon as head and leader of the national aspirations, and thus diminishing her power to incite revolts, the Assyrians at last bethought them of the plan of resurrecting Nippur, the ancient religious capital of the country. Esarhaddon was the first of the Assyrian kings to attempt a restoration of E-kur, some time in the first half of the seventh century B.C. The work which he began was taken up and completed by his son and successor, Ashurbanipal, with great expense and magnificence. This monarch restored the ancient ziggurat, facing it on all sides with panelled walls of brick. He built a great tower of brick at the northern corner of the outer wall, and replaced the ancient mud-brick structures within the inner wall by new and finer buildings of baked brick. He also made free use of enamelled bricks for purposes of decoration. Outside of the temple proper we found his constructions and his records on hill VIII., where he erected buildings for purposes connected with the temple administration, as the Cossæans had erected similar buildings on hills I., IX., and X.

He died in 626 B.C., and shortly afterwards his great empire was overthrown. One of the last places, if not the last, which remained loyal to Assyria in Babylonia was Nippur, as shown by the tablets of Ashur-etil-ilani, son of Ashurbanipal, dating from 621 and 620 B.C., which we found in hill VIII., in the first year of our excavations. Shortly after this Nippur was captured by Nabopolassar, who, with his greater son, Nebuchadrezzar, founded a new empire with Babylon as its capital; the great temple of Bel at Nippur, built by Ashurbanipal, was destroyed by the servants of the other Bel of Babylon, and the brick structures with their decorations of enamelled bricks reduced to formless heaps of débris.

With this destruction the history of E-kur, the temple of Bel, or En-lil, may be said to have come to an end. It was rebuilt again by some later monarch, at or after 500 B.C., probably, but in so different a form that we are constrained to believe that it was no longer a temple to Bel of Nippur, but the house of worship of a deity of another cult, or possibly that it was no longer a temple of any sort, but a building intended for other uses. Such is the history of E-kur, as we learned it from the excavations conducted at Nippur in 1889 and 1890.

But the history of Nippur does not end with the history of its temple. Nebuchadrezzar II. was one of the greatest kings that the world ever knew; but his new Babylonian empire was short-lived. In the latter half of the following century, 538 B.C., Babylon was conquered by the Persians, and Cyrus established a new kingdom, still with Babylon as one of its capitals. Nippur still continued to exist as a city, and we found there inscriptions of the later Babylonian kings, and of the Persian kings as late as the time of Artaxerxes I., 450 B.C.

The Persian empire lasted until the year 331 B.C., when Alexander overthrew it and established a Greek empire in its place. His successors deserted Babylon and carried

the capital farther northward to Seleucia, a little below Baghdad. From this time on we found no inscriptions at Nippur for, among other things, clay tablets as writing material, had almost entirely given way to papyrus or other equally perishable substances, but we found in pottery and clay figures abundant evidence of the occupancy of the city during that period.

This half-Greek, half-Oriental empire of the Seleucids lasted about one hundred and fifty years, to be overthrown by the wild hordes of the Parthian horsemen. Now we are on the downward road in the history of the civilization and culture of the region. The Parthians seemed to go backward rather than forward, and the period of their rule was a period of deterioration and destruction. Four hundred years they held sway, and then gave place to the second Persian empire, the Sassanian. The nominal capital of this second Persian empire, as of the first, was beyond the mountains eastward, but the real capital was Ctesiphon, which the Parthians had built opposite to Seleucia, on the Tigris. These Sassanian Persians were, more or less, fanatical Zoroastrians, and the degree of religious toleration which was allowed under the indifferent Parthians was greatly restricted under their rule. Adherents of other religions, and especially the Christians, were frequently persecuted. What had been left by the Parthians of the shrines of the early heathenism seems to have been finally converted to other uses or destroyed under them. Of course, the old superstitions and many of the old rites and practices lingered on, sometimes under changed names, and in spite of persecutions there were not a few Christians in the country, while the Jews were very numerous and powerful, especially along the Euphrates from the neighborhood of Ramadieh southward below Babylon, as far at least, as Nippur. The abundant Jewish remains from Nippur during the Parthian, Sassanian, and early Arabic

period show what a rôle they played at that place. Of the Christians we found no certain traces, but Arabic historians, quoted by Rawlinson, declare that Nippur was a Christian bishopric as late as the twelfth century A.D.

The Sassanians were more cultivated and civilized than the Parthians; nevertheless, the four hundred years during which they in their turn held Babylon was also a period of deterioration. At about the beginning of the Christian era an Arabic kingdom, the kingdom of the Nasrides, with Hira as its capital, had been established westward of the Euphrates, on the border of the desert, opposite Nippur and Babylon. In the seventh century after Christ there came another Arab invasion, that of the Mussulmans. The Persians were finally defeated in the battle of Kadesieh, on the Babylonian plain, and in the year 637 A.D. the Moslems became masters of the country. Arabic writers report that Irak was still amazingly wealthy and populous at the time of the conquest. It was full of great cities, and with the influx of the Arabs many new ones were founded, such as Kufa, near the ancient Hira, Wasit on the Shatt-el-Haï, and Bosrah on the Shatt-el-Arab. In the middle of the following century the Abbasside Caliphs acquired the supremacy in the Moslem world, and made Baghdad their capital. Then followed a period of great prosperity, promising for a time to surpass the ancient conditions of the empire of Nebuchadrezzar. But this period was of short duration. The Abbassides soon became corrupt, their empire proved to be rotten, and they were succeeded by Turkish hordes. From that time on the history of the country is one of constantly increasing barbarism. The ancient cities, and Nippur among them, became ruin mounds. Persians and Turks struggled for the mastery. Finally, in 1638 A.D., Murad IV. captured Baghdad for the last time, and Irak was definitively annexed to the Turkish

empire. Since that time the condition of the country, already devastated by war and ground down by misrule, has grown constantly worse, until now it has become so impoverished and depopulated that the greater part of what was once the most fertile region in the world is a desert overrun by Arab hordes. In official documents the Turks still call Baghdad "the glorious city," but the glory, not only of Baghdad, but of all the rich plain of Shinar, has long since departed.

CHAPTER XI.[1]

A JOURNEY TO UR.

A Birthplace of Civilization—The Fatherland of Abraham—A Charm against Locusts—An Inscribed Stone—A Necropolis—A Pious Sheikh—Ancient Ruins—An Ungracious Reception—A Parthian Tower—Arab Flirts—A Horse Thief—A Sand Hill—A Cluster of Ruins—An Ancient Inscription—A Happy Find—An Invasion of Locusts—A Box of Tablets—An Ancient Temple—A Poor Tribe—A very Ancient Cemetery—The Home of Babylonian Civilization—Lack of Wood—Sons of Rechab—French Excavations—Babylonian Art—The River of Life—Past and Present—Oriental Hospitality—The Home of Cholera—The Montefich—Place of Pitch—A Door-Socket—Temple of Sin—Ur and Eridu—Dated by Geology—Providential Sandstorm—Hospitable Kaimakam—Erech—Gilgamesh Epic—Gilgamesh and Heracles—Canals.

AN ancient Hebrew tradition, handed down in the Book of Genesis, represents Ur of the Chaldees as the fatherland of Abraham, that is, of the great ancestor of the Hebrew race. The Chaldees were the inhabitants of Babylonia or Chaldea, now called Irak, the alluvial delta of the Tigris and Euphrates, and more properly of the southern portion of this delta. From the latitude of Baghdad southward to the Persian Gulf extends a bay of alluvial silt, the delta of these two great rivers, between the rocky plateau of Arabia on the west, and the mountains of Persia on the east. It is a treeless, stoneless plain, subject to inundations, and often marshy, absolutely flat excepting only for the countless ruin-

[1] For the route of the trip described in this and the following chapter consult map of Irak, at end of Vol. I.

mounds representing ancient cities and canals, and a few sand-dunes. It is one of the two, or possibly three centres, to which the civilization and culture of the world have been traced back by means of myths, rites, symbols, customs, traditions, and the like. Our own civilization originated here, and as for the Hebrews, it may fairly be called their birthplace; for not only does their tradition look to southern Babylonia as their ancestral home, but the evidence of language, religion, and custom points conclusively to the same place. They came from Ur in Chaldea.

Ur is the modern Mughair, Place of Pitch, opposite Nasrieh, on the western side of the Euphrates. But the Ur of Hebrew tradition may be said to stand, not merely for the city itself, but also for the whole region under its influence in the days of its power, when it held the hegemony among the many states of southern Babylonia, northward as far as Nippur, and southward to the head of the Persian Gulf. This whole country, therefore, might properly be called the grandfather land of the Hebrews, as the fatherland of their first parent, Abraham. It was on the northern edge of this fascinatingly ancient region, among the ruins of Nippur, the modern Nufar, that we had been conducting excavations during the years 1889 and 1890. In the former of those years I had made a brief trip southward as far as Tello, beyond the Shatt-el-Haï canal. At the close of our excavations, in May of 1890, I resolved to take a somewhat more extended journey through so much of the region as should prove practicable, to conduct *sondations* at various points, and especially to examine the great ruin-mounds of the country, as far southward as Ur, in the light of my experience at Nippur, with the view of supplementing the work of former explorers. I travelled light, without cook and without escort, accompanied by Noorian, one servant, and two picked workmen, Se'id Ahmed and

Abbas, trusting entirely to Arab hospitality for food and protection. But, unfortunately for our comfort in the matter of food, it was the fasting month, Ramadhan, when no good Mussulman may eat, or drink, or smoke, from dawn till dark. During that month the Arabs sleep by day and eat by night, and as I wished to work and travel by day and sleep by night, I never could be sure of more than one meal in the twenty-four hours.

My first night was spent at Shatt-el-Hosein in the muthif, or guest house, of Hajji Tarfa, the great chief of the Affech Arabs, and here the superstition of the modern natives turned me into a prophet after the order of that Balaam who once dwelt at Pethor, by the river Euphrates. A plague of locusts was beginning to invade the country. Against these Hajji requested me to give one of his friends a charm. I protested that I was no magician, but they insisted. Still I protested, until they shrugged their shoulders and were still. Then I knew that I must yield or else incur the odium of churlishness, as one who could but would not. I asked how I should write it, and they replied: "It is well known, in the name of some prophet." Joel seemed to me peculiarly adapted to the purpose, so I addressed a business letter to the spirits of the locusts, commanding them by Joel's name to leave the fields of Hajji's friend untouched on pain of my displeasure. A difficulty arose when the man asked me what to do with this precious document. But the oracular afflatus fell on me, and I bade him keep it about his person, unless the locusts actually invaded his crops. In that case he was to burn it, and cast the ashes on the waters of his canal, calling on the spirits that rule the locusts to obey my behest. It should be their part to drown their offending subjects in the canal. This I supposed would be their natural fate if they came, so that in any case I should have the credit. However, I washed my hands of all responsibility, saying that I had

made no charms before, nor was I conscious of the power to do so, therefore I could not tell how this would work, and they should inform me of its effect, that I might guide myself in future.

I knew that Hajji was the possessor of a fine inscribed door-socket, found long since on the mound of Bint-el-Amir at Nippur, and inherited by him from his father. I had never been allowed to see this mysterious heirloom, which he was reported to keep buried somewhere within the walls of his mud castle, but this evening, in exchange for my charm, he so far relaxed as to permit me to see a rubbing of the inscription made by himself, but without permitting me to make a copy of it. It turned out to be an eight-line inscription of Ur-Gur, king of Ur. It merely recorded, however, the fact already known, that this very ancient sovereign had built or restored the great temples of Sin at Ur and Bel at Nippur. Hajji told me that Daoud Thoma had offered him £50 for this stone. He told me also of a wonderful ruin-mound in the marshes toward Amara, where there was much treasure; but whoever tried to take the treasure could never find his way out of the marshes.

The next day, accompanied by a guide of rank, Abdan, who was also to serve as guarantee to other chiefs of Hajji's friendship and protection, we started for Bismya, the first great ruin-mound on our programme. Hajji's only surviving son, Mohammed, escorted us to the borders of his father's land, where he received as a present a Waterbury watch, carefully selected for the incredible time it took to wind it up. It was the season of the Euphrates flood, and the country was inundated and difficult to traverse. Delehem stood by the side of our road, island-like, in the centre of a great lake, quite inaccessible, but, as I had visited it and approximately determined its character in the dry season of the previous year, that did not so much matter. It consists of two hills, one

about sixty and the other about forty feet in height, surrounded by a low mound shading almost imperceptibly into the plain. I found here three wells of brick laid in bitumen, and quantities of coffin pottery. From my later experience at Umm-el-Ajarib, I make no doubt that Delehem was a necropolis. It is a prominent ruin, owing to its height, but of small surface dimensions. After the Babylonian fashion, it was so oriented that the corners point approximately toward the cardinal points.

After we had passed Delehem we entered a peculiarly unsafe region, a sort of land of Nod, full of vagabond and irresponsible Arabs, whose hand is against every man, and every man's hand against them. Some of these fellows sprang up suddenly from the tamarisk bushes by the edge of an old canal, calling out to rob us, and shouting for their comrades to come and help them. But when they saw the muzzle of Noorian's Winchester, they vanished as suddenly as they had appeared. At last we reached the camp of a chief of the Sa'adun Montefich, rich in herds of thousands of sheep and camels, close to the edge of Bismya in the desert. Our entertainer, Hajji Abd-ul-Hadi, proved to have made the pilgrimage to Mecca, like all of the important chiefs whom I met in that region. He had an imam attached to his establishment, and he and his people were unusually pious, and prayed frequently in front of his tent, standing in lines and prostrating and rising in unison, with the imam at their head. It turned out that this imam had brought his daughter all the way to Nippur to be cured by my charms the year before. What charm I had given her, whether podophylline pills, Epsom salts, jallap, castor-oil, quinine, sulphate of zinc, or horse-liniment, I do not know. At all events, the charm had worked, and I had great honor in consequence. In regard to medicine they exhibited the same state of belief which we find represented in the ancient inscriptions. It was my magical

power that had wrought the cure, and the medicine was the charm by which I had overcome the evil spirits of disease.

The next morning by five o'clock we were at the ruins, where we were able to work until ten, but always gun in hand. It is a very unsafe region, and Abdan was in a state of constant uneasiness, continually urging us to depart. Both he and the muleteers, men of Affech, averred that certain unpleasant looking Arabs who appeared from nowhere had come to rob us, and were only deterred by the sight of the repeating rifles in the hands of Noorian and myself. Imagine a formless congeries of heaps of clay three-fourths of a mile or more in circumference, and thirty or forty feet in greatest height, strewn with fragments of brick and pottery, with possibly a little portion of a brick wall cropping out here and there, and you have a picture, not only of Bismya, but of a host of similar ruins of ancient cities thickly scattered over the surface of the country. In many places, especially in the early morning, the surface of these mounds will be covered over with a white incrustation of saltpetre, resembling hoar-frost, and as you walk over them you will see here and there thick lines of dust-colored earth, different in appearance from the surrounding soil. The saltpetre represents the decay of ancient remains, and the dust-colored lines represent the tops of ancient walls of unbaked brick. By means of the latter you can sometimes trace out the ground plans of ancient houses, it may be four or five thousand years old, in which, perhaps, lie buried inscribed tablets older than the time of Abraham. And this is the great importance and attraction of these ruins—the immense mass of inscribed material of an incredibly early date which lies buried somewhere under their formless exteriors, and which, when recovered and deciphered, will throw so much light upon the history, religion, manners, and customs of the forbears of our

civilization. In most cases we do not know the ancient names, much less the history of the cities which these mounds contain, even where they were evidently places of the first importance.

Of course, five hours' examination could scarcely result in great discoveries. We found remains of a large building, of brick and adobe, and in a clay drain-well of pipe rings, close to the surface, we found several fragments of tablets, and one entire clay tablet, which, unfortunately, did not contain the name of the city. It was evidently a city of ancient date and great importance. It was connected with Nippur by a navigable ship canal, the Nil, and the two cities must have been in close relations with one another, for along the course of the canal between the two runs an almost continuous chain of small ruin-mounds. It is not improbable that Bismya represents the ancient Nisin, or Isin, a sort of sister city of Nippur, and one of the most important places in southern Babylonia. Like the other great cities of this region the time of its prosperity seems to have been the third thousand B.C., and somewhere toward the middle of that thousand we find it enjoying for a brief period hegemony over much or all of this country. Inscriptions found at Ur and Nippur show that the temples of both cities were restored by Ishme-Dagan and other kings of Isin, and that those cities themselves were among the tributaries of Isin. This is about the sum of our present knowledge of Isin, but if Bismya be indeed the site of this important place, valuable discoveries await the spade of the explorer who shall some day be fortunate enough to dig there. There was no water near Bismya at that time, and the place was very unsafe.

That night we spent by an unnamed ruin-mound in the camp of a Rufe'ya chief, Hajji Iz'ayr, and the next morning with the sun we set out to look for my last year's friend, Hamud-el-Bendir, who was said to be en-

camped near Tel Safi, and from whom I expected great things. Safi is a prominent and promising looking tel, close to the Shatt-el-Kahr. The latter is an enormous, deep canal, as large as a river, but dry, or almost so, since the change of course of the Euphrates; but the ruined mud villages along its banks showed that there had been water there not many years before. Hamud had moved his camp, and we found it two or three hours farther southward, in the midst of an almost boundless greensward, an unusual sight in that gray-and-brown country. I gave Hamud the gun which Bedry had promised him from me. He took it and thanked God, but made no pretence of doing anything for us. We gave him a message from Hajji Tarfa, on which he scoffingly asked if those ma'dan had sheikhs. He called Noorian a *khoja*, *i. e.*, a Jew, and broke camp the next morning, leaving us to shift for ourselves.

Thursday, May 8th, we reached the ruins called Hammam, or Hot Bath, a very common name for ruin sites in Turkey. The principal ruin is a high tower of unburned brick, about which are a few low mounds of no great extent. In that absolutely flat country this tower, forty feet or so in height, forms a prominent landmark, visible to a relatively great distance, and is a favorite watch-tower of the bedouin. From the reports of some former travellers I had expected to find here great ruins of a city and temple of the first class, the latter with a ziggurat, or high place. It chanced, moreover, that Loftus, the pioneer explorer of this region, found on, or by, one of the smaller mounds, quite on the surface, a statue of Gudea, patesi of Sirpurla, whose buildings de Sarzec afterwards unearthed at Tello with such splendid results. This helped to increase my expectations of Hammam, only to make my disappointment the greater. The tower-like ruin proved to be no ziggurat, but a square tower, built probably for purposes of defence.

The interior was hollow, and digging there we found evidences that it had once been occupied by a structure of brick and mortar, around which had been built with sun-dried bricks the solid, massive wall of the tower. It was not a large tower, some seventy feet square, I should say, with an entrance on each of its four sides. The sun-dried bricks of which it was built were in shape unlike anything that I had ever found in old Babylonian ruins. The clay of which they were made was not well worked, and the straw with which the clay was abundantly mixed was in a suspiciously excellent state of preservation. In fact, Hammam bore every mark of a comparatively recent ruin. The low mounds about it, as far as I could probe them, contained nothing, and some of them certainly were merely the banks and beds of former canals. I could nowhere find any traces of important buildings, nor indications of antiquities. Neither do the Arabs appear to find Babylonian antiquities here, as they do at other neighboring mounds. The two experienced workmen whom I had brought with me, after rooting up the ground in a number of places, unqualifiedly pronounced Hammam "no good." It seems not unlikely that it was a tower to protect the canals, erected some time in the post-Babylonian period, and probably later than the Christian era. The statue found there may have been brought from Yokha, or from other of the neighboring ancient sites, and dropped. While there an Arab of the neighboring Ahmed tribe told of the discovery of a stone statue near Umm-el-Aqarib. He and Se'id Ahmed were sent to fetch it. It turned out to be a small sitting statue of marble, so badly mutilated by the Arabs that it was little better than a shapeless mass of stone. We finally dropped it at Tel Ede to make room in our crowded panniers for more valuable objects.

The incidents of our half-day's stay at Hammam are worth recording as illustrative of the conditions of life in

Ruins of Hammam from the north. Photograph of Wolfe Expedition.

that country. Having a few old crusts of barley-bread, some figs, and some nuts, last relics of our last meal at Nippur, Noorian and I went to a stagnant pool of rain-water hard by to eat our lunch. Some women from a neighboring camp of Arabs were bathing there, and at the same time filling their water-skins; the donkeys which carried the skins also standing in the water. As we approached the women donned their blue tunics, but still continued to wash their feet and disport themselves in the pool. Then a man came and drove a herd of camels into the pool to drink. A small, stagnant pool of rain-water, in which men, camels, horses, asses, dogs, and sheep wade and bathe, and out of which all drink; such is the life of the desert! Seeing us eating, the women commenced to call us infidels, which we stoutly denied ourselves to be.

"Then why do you eat in Ramadhan?"

"To travellers it is permitted to eat in Ramadhan."

"No, it is because you are infidels that you eat in Ramadhan."

"We are not infidels; but we are travellers, therefore we eat in Ramadhan."

"We do not eat in Ramadhan. You are infidels."

"That is your ignorance. The Koran says the traveller may eat—even in Ramadhan. And as for us, we are not infidels."

"Then who is above?"

"Allah is above."

"Truly they are not infidels, for they believe in Allah. They might even marry some of us."

Then commenced a very free and amusing play of chaff between them and Noorian regarding their price, their charms, his means, the price he would pay for a wife, etc. One of them in particular was a real flirt. She wore a pair of heavy silver anklets, which she took pains to display with results that would have done credit to a ballet-

dancer. Finally Noorian arose to fill our leather bottle with water. I called to him to fill it as far as possible from the point where the women were stirring up the mud and washing their feet, in the hope that it might be a little less filthy. They asked what I had said, and he translated the idea with brutal frankness. Their indignation was quite ludicrous, and they scolded me vociferously. I was, after all, nothing but a vile infidel, and the dirtiest part of their bodies was cleaner than my soul itself. The water in which they had bathed their feet might cleanse, but could not defile me.

The other incident was more serious, and almost resulted in a tragedy. I was trying to take a nap in the shade of the tower in the heat of the day, when I was roused by a gun-shot and the sounds of a general hullabaloo. Through the carelessness of the muleteer our one good horse had been stolen, and was already fast disappearing over the desert, bestridden by a strange youth, who had followed us from Hamud's camp that morning. But Sefa', an Ahmed chief, who had come to bring me some camel's milk and beg me to become his guest, and who was waiting on the other side of the tower until I should wake up, instantly mounted his mare bareback, and, with one follower, Go'ert, started in pursuit. From the top of the mound we watched them disappear in the distance over the boundless plain. At last we saw them returning, the chief mounted on my horse. I descended to meet him. He came galloping up, his loose garments and kerchief head-dress fluttering gracefully in the breeze, and, springing to the ground, his eyes flashing, and his handsome face kindled with excitement, held up before me a naked scimitar, slightly stained with blood. The robber, of the notorious edh-Dhafir tribe, had sought refuge at some tents of the Bene Hakhem, where Sefa', overtaking him, tried to cut off his right hand, according to bedouin right toward those taken in the act of rob-

bery. He gave him one cut, when the Bene Hakhem rushed out upon him with guns and threatened to shoot him; for the youth was already within their tent-ropes and entitled to their hospitality. So the robber escaped, and only by promptly seizing the horse and galloping off could Sefa' rescue that, not without some danger of being shot by the angry Bene Hakhem—so he assured us.

I had intended to pass that night at the neighboring mound of Tel Ede, but Sefa' kissed me and entreated me, and of course I could not refuse to become the guest of the man who had just done us such a service. Nor did I regret it. I never received at the hands of any man more charming and simple-hearted hospitality than I received at the hands of this petty chief of a poor and insignificant Arab tribe.

The talk in the muthif that night, as the coffee passed around, was about the great incident of the day—the theft of my horse. All came, and all took part in the discussion, sometimes in loud tones of general harangue, while again a number of little groups would discuss it separately. Each man told me what he would have done, and boasted of his prowess and the speed of his mare, and all were proud of Sefa', their chief, and cursed the robber and his tribe, the edh-Dhafir, and the Bene Hakhem who had sheltered him. Sefa' had intended to capture the youth and bring him back to me, he said. It would have been the proudest moment of his life, if he could have laid the robber bound at the feet of "the Beg." What would I have done with him? Would I have cut off his head on the spot? And they all twirled their rosaries through their nervous fingers; and Go'ert politely forced his rosary into my hand and made me do the same; for this is their method of silent small talk.

But not only did Sefa' entertain us, he and Go'ert gave us escort for several days. Sefa' rode a mare which attracted my attention, because it was of a breed not found

in that region, and I inquired about her. With much glee he said that she had been stolen by his brother, who was the most skilful horse-thief in that country. A day or two afterward I met a man whose right hand had been cut off because he was caught in the act of stealing. He was disgraced for life. Stealing in itself considered is honorable, only to be caught is dishonorable.

Tel Ede, the next ruin which we visited, proved even more disappointing than Hammam. It also had been reported to be a ziggurat, but it turned out to be a group of natural sand-hills of rather curious formation. One long hog-backed hill, over seventy feet in height, is supported by smaller hills of the same formation, all composed of fine beach sand packed together with rock-like consistency. At the base of these are the remains of an ancient Babylonian town of no great size, Mar by name. Some miles southward, close to Erech, are similar solid sand hills, called Nufayji, and not many miles to the northeast is a region of shifting sand-hills, by which the ruins of Yokha and Ferwa are at the present time surrounded and half-buried. This latter is a singular and most desolate tract, utterly barren, swept and polished by moving masses of white sand, which is piled in hills by the winds one day, to be carried off and piled elsewhere a few days later, but nevertheless always remains approximately in the same place. The hills themselves are often twenty feet or more in height, and occupy a space of a dozen or fifteen square miles. Another similar region of shifting sand-hills exists just to the north of Niffer, and several more are reported in various parts of Irak. Former explorers have conjectured that this sand has been blown in from the Arabian desert. Leaving out of consideration the difficulty of accounting for its passage over the Euphrates and the marshes which intervene between it and the desert, the existence of original sand-hills of the nature of Tel Ede and Nufayji suggest

another origin. Layard reports, however, on the basis of information derived from the Arabs, that the sand comes from springs in the ground, out of which sand pours like water.

Yokha, or more properly Jokha, the next ruin-mound which we visited after Tel Ede, is one of the most ancient and promising of the ruins of this region. The mounds are low and formless, but very extensive, and fragments of pottery and the like are strewn over the plain for a great distance on every side. Fifteen minutes to the southwest of Yokha are the similar but smaller mounds of Ferwa, with Abu Adham the same distance to the southeast of that, and another nameless mound still five minutes beyond this. Evidently an important centre of population once existed here. Close to these mounds, moreover, runs an old canal-bed, said by the Arabs to be the Shatt-en-Nil, or ancient Nil canal. This was one of the greatest ship canals of Babylonian antiquity, almost if not quite equal in importance to the river Euphrates itself. It left that stream at Babylon, which owed its commercial importance in part to its situation at this junction of waterways. One branch of the canal, according to the statements of ancient writers, connected the Euphrates with the Tigris. Another branch ran southward through Nippur, and this we were able to trace past Bismya and Yokha until it rejoined the Euphrates at Warka, the ancient Erech. These great cities, therefore, possessed direct water communication with one another. The importance of this will be perceived when it is recollected that ancient Babylonia was as thoroughly dyked and dammed as modern Holland, and that water, not land, formed the natural channel of communication in the days of its prosperity.

At Babylon, Nippur, Erech, and almost all other ruin-mounds which I visited in Irak the surface is strewn with brick, pottery, and some glass, but stone is very rare.

At Yokha and the neighboring mounds, however, stone fragments are quite numerous. In addition to millstones, pestles, pounding-stones, flints and pebbles for domestic use, all imported from other countries, there are quantities of fragments of vases and similar worked objects made of stone, testifying on the one side to a considerable development of the art of stone working, and on the other, from the nature of the stones used, to commercial intercourse with Arabia, as far, probably, as the Sinaitic peninsula. Such objects are also, so far as my experience goes, an evidence of an antiquity antedating 2000 B.C. In the case of Yokha we can prove this early date with certainty. Loftus found here a small stone statue of the Tello school of art, dating from the third thousand B.C., and the University of Pennsylvania possesses an inscribed door-socket of the same period. The inscription on this stone reads, according to Professor Hilprecht's translation: "Gimil-Sin, the mighty king, king of Ur, king of the four quarters of the earth, has built for Marduk his favorite temple." Unfortunately, Gimil-Sin has not added the ancient name of the city. We only learn from the inscription that this city, whatever it may have been, was tributary to Ur about 2500 B.C., the approximate date of Gimil-Sin, and that it was the special seat of the worship of Marduk or Merodach, the same god who appears later as the patron saint of Babylon, and ultimately usurps the title of Bel, the lord, and becomes the supreme and almost sole god of the country.

In addition to this stone, the University of Pennsylvania also possesses a number of very curious, inscribed clay tablets from Yokha, which have not yet been deciphered, but which Pognon and Hilprecht both pronounce to be older than 2000 B.C. These tablets seem to contain business contracts and records, but, unfortunately, like the door-socket from the temple of Marduk, they also fail to mention the name of the city. We can

only say that it was a place of wealth and importance in the middle of the third thousand B.C., and that at the close of that thousand it was already in ruins, and had ceased to be inhabited. This may seem to be an impotent and unsatisfactory conclusion, but it must be remembered that we are only beginning to find our way in the ancient history of Babylonia, and have as yet few landmarks to guide us, so that even such a result as this has its importance.

But wealthy and prosperous as it once was, Yokha is certainly not a pleasant place of residence at the present time. There is not a drop of water within three miles, even in the season of the inundations, and the lightest wind raises a suffocating cloud of dust. As there is always considerable wind a few feet above the surface of the plain, at least by day, so there is an almost continuous sand-storm on the mounds.

We arrived at Yokha in rather poor condition. The water at the camp of the Sa'adun chief, Hajji Mensur, where we had spent the previous night, was so animated that we were compelled to strain it through our handkerchiefs before we could persuade ourselves to drink it. We had originally stopped at this camp in the hottest part of the day on our way from Tel Ede to Yokha, merely to get a drink of water, for lack of which our men had refused to work longer at Tel Ede, and to ask the way. Hajji Mensur insisted, however, that we should spend the night with him and go on in the morning, and would not take no for an answer. They were very religious people at this camp, and Hajji Mensur, noticing that my tent was lined with green, the Moslem sacred color, borrowed it from me for a half hour or so, had all his rugs transferred thither, and turned it temporarily into an oratory, to my surprise and amusement. But although he had thus insisted on making us his guests and had prayed in my tent, our pious host broke camp very early

the following morning, apparently for the purpose of making us move on, and to avoid the duty of giving us something to eat. The consequence was that, as before said, we were not in the best condition when we reached the mounds of Yokha. The wind was already quite strong there, and it was with some difficulty that we could erect our tent. Then we set to work to explore the mounds, sending Abdan and one of the muleteers down to the plain to try and get some water and some bread. They did not return, and we grew very thirsty. Sefa' saw a herd of camels a mile or so away, and suggested that he and I should go and see if we could not milk one. But when we reached them the camel herdsmen were there, and would neither sell nor give us any milk. We learned, however, that there was a Montefich camp a couple of miles farther away, and decided to go to that and see what we could find. On the way we found Abdan sitting on the ground groaning, hugging himself, and perspiring most profusely. He told us that he was dying. In fact he had drunk too much sour milk, and had a bad stomach-ache. The muleteer came along just then, and we hoisted Abdan on a mule and sent him and the muleteer, with the bread and water which they had obtained, back to our people at Yokha; while we continued our ride to the camp where they had obtained those things. This proved to belong to a Sa'adun sheikh, named Ghalib. He entertained us with considerable hospitality, and insisted on giving us quite a dinner, after which we returned to Yokha, to find everything enveloped in clouds of sand. Noorian and the men had abandoned work altogether, and were lying huddled together in the tent, literally almost buried in sand. They were in consequence strongly of the opinion that Yokha was a place where nothing would be found, and anxious to strike the tent and leave at once.

It was with much difficulty that I could make one of

the men, Abbas, come out and work with me. Now I was convinced by what I had observed that Yokha was not only a very important and ancient ruin, but also that the antiquities did not lie very far beneath the surface. But my first few efforts at excavation were without important results. In the meantime evening was approaching, and Sefa' insisted that we must not pass the night on the mounds. Partly this may have been due to the belief, common also among the ancient Hebrews, that all ruin-mounds are haunted by evil spirits, but partly it was due to the fact that he feared lest, if we remained on the mounds, we should be attacked by foes of a more carnal nature. For in bedouin regions a barren patch, a no-man's land, is always peculiarly unsafe ; every one is free to rob you there. You must encamp by the tent of some sheikh, in order to secure his protection. Accordingly Sefa' insisted that we should go to the tents of Ghalib to spend the night. At first I declined to go, as it had been my intention to camp on the mounds in order to have as much time as possible to explore Yokha. But Sefa' pointed out what he regarded as sure signs that some neighboring Arabs proposed to attack us as soon as it should be dark, and all the others grew so uneasy that at last I had to give the order to load the mules and strike the tent. However, I made the best use of my time, while they were catching and loading the mules, and Abbas and I worked hard with our picks and scrapers. At last, quite close to the surface, we found an inscribed tablet of unbaked clay, then another, and another. Then we found a fine and very curious tablet of well-baked clay of the most ancient period. Soon we had two or three more similar tablets. But by this time the mules were loaded, and Sefa' was begging us to hasten before it should be quite dark. It is difficult to describe the feelings of the explorer when he has made a "find"; danger, hunger, thirst, and all

physical discomforts are unknown in such moments. I finally ordered the mules to go ahead towards Ghalib's camp, while Abbas, my horse, and I should remain until we came to some sort of stopping-place, as it were. When we finally started my pockets were full of as many beautiful tablets of baked clay as they could carry, and several more were carefully buried in a sand-heap near the place where we had been digging. Of course we were full of excitement, because here, on a ruin-mound never before explored, whose ancient name even was unknown, we had found inscribed tablets, at least four thousand years old, in a most beautiful state of preservation, ready to reveal to us we knew not what secrets of antiquity. We had not expected quite such a success as this from a little surface-scratching of an ancient mound. Moreover, what we had found gave us assurance of the existence of more material of the same sort close to the first; and we looked forward with great anticipations to the resumption of the work on the morrow.

It was long after sunset when we arrived at Ghalib's camp, and I think that that chief had already some time had his evening meal. However, he ordered something to be prepared for us, and while we were waiting for it to be ready I sat on a rug with him in front of his muthif and instructed him in smoking an American pipe, which, being very different from an Arab pipe, afforded him much amusement. Suddenly an army of locusts on the march was upon us. By diligent use of both my hands I kept them off my neck and face, but my legs disappeared, and my tobacco-pouch and other objects that lay beside me were covered to a depth of several inches. They could not penetrate beneath my tight-fitting garments, but the poor drawerless Arabs all around were frantically hopping up and down, and slapping themselves in ridiculous agonies of ticklishness. Ghalib maintained his dignity for some time; but at last he told me that, while he gen-

erally wore drawers, he had left them off that day, and got up and joined the dance. I was left alone on the rug, the nearest approach to a stationary human being, so far as I could observe, in the whole encampment. After some time it was reported that the tents at the other end of the camp were almost free of locusts, and we adjourned thither. Our own tent and part of our effects were so buried that we left them behind, sleeping in the open that night. As to dinner, it was past midnight before we got anything to eat, for the locusts in their first onset had put out the fires and overlaid and permeated the food Ghalib's women were preparing for us, and it was necessary to build fresh fires and cook another dinner.

The next morning Ghalib broke camp before three o'clock, and we were obliged to do the same. It was only by the most stalwart and persistent begging that we obtained a very little drink of camel's milk to stay our stomachs for the hard day's work before us. We further succeeded in hiring a camel to carry water, and later in the day one of the camel drivers procured us a little barley-bread. With this provision we spent another day in examining Yokha and the neighboring mounds. The heat was intense, so that I could not thole my bare hand on the metal portions of my gun, or even on the sand. But the results repaid us, and we carried off a whole box of tablets when we left, more, in fact, than we were able properly to care for with our lack of preparation for such a "find." They were found all stored together in a hole in the ground, where they had evidently been buried by someone between four thousand and five thousand years before.

From Yokha we went to the sister ruin-mound of Ferwa, which proved to be a smaller collection of mounds of the same general character. A short distance beyond Ferwa was another ruin-heap, called Abu Adham, where

I found the remains of an interesting building, two rooms of which I was able to trace in their entirety. The inner room was a hall of columns, such as Solomon built in his temple at Jerusalem; only these columns were of brick and not of wood or stone. The line of the outer walls of both rooms also was relieved by half columns at regular intervals, making the two appear to have constituted a whole by themselves. The corners of the building, after the ancient Babylonian fashion, pointed roughly to the cardinal points. Altogether this group of mounds seemed to me one of the most interesting in the whole country, and I believe that it is destined to yield results of the most valuable description to the explorer's spade.

In the afternoon a sandstorm arose. We were on our way to Umm-el-Ajarib (Mother of Scorpions), three miles to the southeast of Yokha, intending to pass the night at such camp as we should find near that place. But by the time we reached Umm-el-Ajarib the air was so full of sand that we could see but a few yards before us, and were obliged to keep close together that we might not lose one another. There was a camp near the mounds, and the water of the inundations was only a quarter of a mile away, but we saw neither, and after vainly groping about, as it were, in the dark, we finally turned back to try and find a camp which I had noticed close to Ferwa on the south. This proved to be a camp of Bene Temim, who are donkey-herds, and, like all donkey tribes, very poor. They were too proud to let us buy food, and too poor to give us much. Our dinner consisted of rice and rancid butter, and the next morning we got nothing. Nor were the facilities for sleeping much better. At first the wind was so strong that we could not pitch our tent; later swarms of mosquitoes fell upon us. The next morning I found a scorpion in my sleeve, and later we dug up two or three more of these creatures at the mounds of Umm-el-Ajarib, together with two snakes, killing a third

snake on the surface. As usual, the Arabs declared the snakes to be poisonous.

Umm-el-Ajarib is an ancient necropolis. It was a sacred burying-place long before Abraham's day, but its ancient name and the special cause for its sanctity are alike unknown. The burials in the central portions of the mounds were chiefly in cists of brick, of which only the floors and a few courses of the bricks of the sides remain. The floors were thickly covered with ashes, indicating the custom of burning in connection with the funeral rites. The bricks were laid in bitumen as mortar. They were of a peculiar fashion, which I found at Nippur only in the most ancient buildings. The cists themselves were regularly arranged, like cemetery lots, and streets could be traced among them. Generation had been buried over generation, in how many strata I do not know, but the mounds at their highest part measure forty or fifty feet. The whole was drained by a system of wells of pottery rings, set at intervals of twelve or fifteen feet apart. In one of these drains I found a piece of an old Babylonian tablet. Toward the southeast corner the mounds rose to their greatest height, about thirty feet above the general level. Here there was a much larger building and vast accumulations of ashes. Fragments of stone vases and utensils were as numerous as at Yokha. While we were at Hammam there had been brought to us, as already narrated, from the plain below the mounds of Umm-el-Ajarib a badly defaced statue of coarse, white, calcareous stone, about eighteen inches high. It represented a man in a sitting posture with the hands clasped on the breast, like the famous statues from Tello. De Sarzec once made a flying trip to this point, which he incorrectly calls Moulagareb, and found here a head which is exhibited with the Tello statues in the Louvre. It is regarded as the most remarkable head in that collection, and, although

not the oldest, is nevertheless claimed to antedate 3000 B.C. At least Umm-el-Ajarib was a very ancient necropolis.

But Umm-el-Ajarib was not the only site of this nature in that region. Zerghul, close to Tello, is a mound of the same character; Delehem, near Nippur, is another; and similar cemeteries existed in connection with Ur and Erech. On the other hand, no great cemeteries have been found in either northern Babylonia or Assyria. The people of those countries, and even of other remoter regions, seem to have brought their dead to be buried in the cemeteries of southern Babylonia. The reason and meaning of this are apparent. Southern Babylonia was the home of the ancestors of the more northern people. When the first generations migrated northward they carried back their dead to be buried in the tombs of their fathers, just as the Hebrews carried the bodies of Jacob and Joseph back to Palestine. This custom grew into a religious rite, until, in course of time, the cemeteries of southern Babylonia became sacred burying-places,[1] not only for those who derived their ancestry thence, but for other peoples also. With slight changes, the custom once established passed on from race to race and religion to religion, until to-day we find the modern Mussulmans of Persia bringing their dead to be buried at Nejef, Kerbela, and other less famous sites in Irak. The ancient and original sacred cemeteries were located, as will be observed, in the region which I have designated as the fatherland of Abraham.

Three hours and a half from Umm-el-Ajarib is the Shatt-el-Haï, or River of Life, a great ship canal which has from time immemorial connected the Tigris with the Euphrates. Irrigation canals run out from this, and the

[1] The statement in Arrian, already referred to, that the graves of the Assyrian (Babylonian) kings were in the marshes of southern Babylonia, might be cited in further confirmation of this statement.

land is cultivated to some distance on either side. It was beautiful to see the green fields once more, after the brown, barren monotony of the desert, but trees appeared to be as deplorably absent here as elsewhere in Irak. This has always been characteristic of the country. In some regions, as at Nippur, tamarisk scrub and camel thorn are abundant, but in general dung has constituted the principal fuel because of the absence of wood. It was this lack of proper fuel which caused the ancient Babylonians to use so extensively sun-dried bricks and adobe as building material, and even to write the larger part of their contracts and similar documents on tablets of unbaked, rather than of baked clay. Only very great kings, who were able to draw their wood from other countries, could afford to make much use of baked clay. The comparative rarity of bricks, again, caused kings to stamp those which they made with their names and titles, and bricks once made were used over and over again by successive builders. You may find in one and the same wall half a dozen inscribed bricks of different kings living hundreds of years apart, and this is equally true of the most ancient times and of the present day. I have found in the most ancient walls of the most ancient kings at Ur and Nippur still more ancient bricks used a second or third time. Similarly, in the grand palace of the Persian Chosroes at Ctesiphon, not a few Nebuchadrezzar bricks may be found, and I have lived in a modern house in Hillah built of bricks stamped with the name and titles of the same monarch.

We were very hungry when we reached the shores of the Shatt-el-Haï, and turned into the tents of a Bene-Rechab chief, Hammadi, whom I had visited the year before, in hope of obtaining food of some sort. These Bene-Rechab were supposed by Loftus to be the descendants of that Jonadab, the son of Rechab, mentioned in the Bible, whose sons were so faithful to their father's

command not to dwell in houses, and never to drink wine. They, therefore, assumed great importance in his eyes, and he found out many wonderful things about them. It is true that they do not, as a rule, live in houses, but in huts or tents, according as they stand nearer to the bedouin or to the ma'dan stage of civilization, or lack of civilization, for they are in the process of transition from the former to the latter; neither do they, any more than all Arabs, drink wine, but there is no possible connection, it is hardly necessary to say, between them and the sons of Rechab of the Bible. They are not a tribe of high rank, as the Arab rating goes, and were, until recently, among the tributaries of the Sa'adun Montefich. They did not treat us with nobility, and although I doctored most conscientiously an offensive open wound from which their chief was suffering, and even gave him some iodoform for future use, they gave us no food, nor did we taste any that day until we succeeded in buying some cucumbers on the very shores of the Shatt-el-Haï.

Our next objective point, Tello, was situated on the southern shore of the Shatt-el-Haï, somewhat lower down. As at this season of flood the land in the immediate neighborhood of this canal on both sides was largely under water, we decided to make the rest of the journey to Tello by boat. Accordingly we sent the horses and mules on empty with the muleteer and one of our workmen, and engaging for ourselves and our luggage a turada, a long, narrow boat of Indian wood, smeared with bitumen, we dropped down stream to de Sarzec's old camp, which we found occupied by an Arab village. Here, fortunately, the people were willing to sell us a lamb, some unleavened barley cakes, some cucumbers, and some milk, and to loan us a kettle, with which equipment we were able to secure a good square meal, and of this we all stood sorely in need. Indeed, for my own part, I was so starved and exhausted that I felt a wild

craving for some strong liquor, and would have been almost ready to have given an inscribed tablet from Yokha for a bottle of whiskey. I had never understood before how much a craving for stimulants may be due to an exhausted system.

De Sarzec has deservedly won both fame and pelf through his excavations at Tello, or the Ruin Heaps, and the statues which he excavated there now form one of the greatest treasures of the Louvre. These excavations were conducted at intervals during a period of nineteen years, the last expedition terminating in 1894. The mounds proved to cover the site of an ancient city, Lagash or Sirpurla, long a tributary of Ur. There were found here, among other things, a number of inscribed statues, for the most part of a greenish-black diorite, of astonishing artistic excellence ; a large inscribed silver vase; and a building with very remarkable pilasters of inscribed brick ingeniously made in special forms for the purpose; all belonging to a certain Gudea, subject king or viceroy of Sirpurla, some time before 2500 B.C. Latterly an immense deposit of inscribed clay tablets has been found here by the Arabs and looted. Similar but less abundant remains of Ur-Bau of Lagash, and Ur-Gur, and Dungi, kings of Ur, were also discovered, together with a number of reliefs and inscribed objects of various kinds of still earlier kings, the most archaic yet found in Babylonia outside of Nippur. The stone inscriptions are all votive in character, and therefore throw little direct light on historical events. On the other hand, the objects themselves possess the greatest value for the history of art, as well as of civilization. They have revealed the existence in southern Babylonia, before 3000 B.C., of an art so highly developed that we must suppose it to have been preceded by centuries of civilization.

Of course this art was not confined to one provincial town, Sirpurla, although that seems to have been the

centre of artistic influence, the Weimar of southern Babylonia, whose princes were great patrons of art and artists. As already pointed out, a statue of Gudea has been found as far north as Hammam, and work of the same or a similar character has been discovered at Umm-el-Ajarib and the mounds of the Yokha complex. At Nippur also we found fragments of similar statuary. This seems to indicate that a more extensive examination of the ruin-mounds of southern Babylonia will reveal still further remains, which may enable us to trace the history and development of this art further in both directions. As far as our present knowledge goes, it began in the fourth thousand B.C., and ended in the third thousand. Fifteen hundred years later the Assyrians developed an art which is presumably the offspring of the art of southern Babylonia, but how, or by what stages, remains to be discovered.

Tello consists of several low mounds covering a large surface, much of which has not yet been explored. De Sarzec's work was very limited in the amount of actual excavation, and his discoveries were, comparatively speaking, on the surface. Walking over the mounds I found a profusion of bricks with Babylonian inscriptions, four different inscriptions in all, and one with a curious bilingual inscription,[1] Aramaic and Greek, later than the time of Alexander the Great. Inscribed cones could be had by the bushel. These are clay objects, seven or eight inches in length, and in shape resembling large, round-headed nails. They are a conventionalized form of the phallic symbols, which in one shape or another abound all over southern Babylonia. They were thrust or built into the walls for a religious purpose.

[1] This is an inscription of a certain Adad-nadin-akhes, or Ramman-nadin-akhe. It is interesting to see the ancient Babylonian name reproduced at that late date. The four Babylonian kings whose bricks I found lying on the surface were Ur-Gur and Dungi of Ur, and Gudea and Ur-Bau of Lagash.

From Tello we descended to Shatra by turada, sending our horses around by land as before. There was an active life on the river, and we passed many boats, chiefly loaded with women, the men, as many as there were, naked or half-clothed, pulling on the towpath. Villages were numerous, and cattle and buffaloes plenty. The latter stood up to their eyes in the water on the fluid banks. Their keepers, naked, or almost so, did the same, whether as a protection against the heat or the tormenting flies. Along the northern shore marched a mighty column of horse-like locusts, looking for a crossing. Detachments from the main column were constantly attempting to fly or swim across, and the river was full of their bodies, for ninety-nine were drowned to every one that reached the southern shore.

Shatra is a comparatively thriving town of five hundred houses. In regard to the construction and arrangement of its private dwellings it seemed to me to differ little from ancient Nippur. The houses are built of sun-dried bricks or adobe, with a few courses of poor fire-baked bricks below. Toward the street is a blank wall. Through a passage-way, on one or both sides of which may be small rooms, you enter a court. This is surrounded by rooms and covered alcoves, and out of it open one or more interior courts for the women and children, the servants and kitchen, etc. The larger rooms are narrow in proportion to their length. The roofs are formed by stretching split palm logs on poplar poles from side to side. Over these are spread palm-leaf mats, and the whole is covered with a couple of feet of well packed earth. The roofs are reached from the court by stairways entirely without balustrades. Sometimes you find a small roof room, more often there is nothing which could be called a second story. Toward the street and the neighboring houses there is usually a parapet of sun-dried bricks to shield the roof from the in-

trusion of other eyes, but toward the court there is nothing. The roofs and the courts constitute the bedrooms of the entire population during the greater part of the year. On the outskirts of the city are a number of huts of reeds and mats, the homes of the poorer and semi-nomadic inhabitants. As for the everyday life of the people, Abraham might dwell in Shatra to-day and find little change, except for the use of coffee and tobacco. And if no such ancient sheikh can be found among its inhabitants, at least not a few modern sheikhs of the Sa'adun Montefich have houses there, which they occupy during part of the year, and you find the same combination of bedouin and town life, and the same possibility of easy transition from one to the other which existed at Ur of the Chaldees in the days of Abraham.

Belal Effendi, one of the principal men of the place, took us in and entertained us with a hospitality that reminded me of the Arabian Nights. His house and all he had was mine, and he sought to forestall my every act by some attentive courtesy. When we went to the bath his servants had anticipated us, incense was burning, and handsome cloths were spread in my honor, and the bathman had been instructed to refuse a fee. The roof of his house was surrendered to me for a bedroom. The first night as I went to bed a wailing arose from a roof hard by. A soul had departed, and the women were wailing for the dead. It is a horrible, weird, uncanny noise, but half-human, the same which has been used by the people of the East since time has been, but such as in our Western lands only the violently insane seem capable of uttering. In the distance, on the edge of the town, the jackals, like disembodied children, were crying piteously, fit accompaniment to the uncanny death-wail.

At evening, as the shadows began to fall, I used to sit in front of Belal's house and watch the life of the country. A little way from me sat the kaimakam (pre-

fect), the kadi (judge), the officers of the garrison, and all the notables of the town. That street along the river was both the lounging-place of fashion and the business centre of the community. Horses and mules and donkeys were always drinking and bathing. Women in nose-rings, blue tatoo, and one blue cotton garment came to fill their water-jugs, taking advantage of the opportunity to wash their feet, or even, if no man were close at hand, to take a surreptitious dip in the cooling, muddy fluid. Long boats crowded with wild, picturesque Arabs were constantly arriving and departing. Although it was Ramadhan, life along the river front was active and diverting.

It was in the neighborhood of Shatra that the cholera epidemic originated which swept Irak and travelled into Persia in 1889, reaching Europe through Russia in 1892. Shatra itself suffered so terribly that the people deserted their houses and fled into the desert, burning all the reed huts as a disinfectant. It is asserted by the authorities that cholera is endemic in that region, as the Bubonic plague was in all Irak until it was stamped out a generation ago. It is a flat country, very little above the water level, and there are permanent marshes of large extent. The life of the natives is barbarous and insanitary in the extreme.

Friday, May 24th, we started down the River of Life for Mughair, sending our horses empty through the marshes. As we descended the stream grew smaller. Branches ran off hither and thither, the marshes grew larger, villages became infrequent, then ceased altogether. Still there were buffaloes with their keepers wallowing in the mud, and the march of the locusts continued as before. Boats we met in numbers, towing up the stream. There was little wind, the heat was intense, and the fly-bites maddening. We met a turada which had come up the Euphrates from Bosrah, and the people, noticing my

helmet of Indian pith, called out one to another, "Have the English come here, too?" Finally the stream lost itself in little channels in the mighty marshes which stretch out behind Nasrieh. Night fell, the boatmen, worn out, proposed to stop until dawn at some miserable huts in those fever-stricken, mosquito-tormented marshes, and even Noorian was of the same mind, but I threatened and persuaded, and we pressed on, reaching Nasrieh late at night, after a journey of fifteen hours and a half, there to go supperless to bed on the roof of a khan. The next day we were surprised to see about us a new and thriving looking city, built of real brick, which at first sight one might have fancied to be a small German factory town transplanted thither by magic. It was built some twenty years since by Nasr Pasha, a great Montefich chief, who ruled the whole country from Bosrah to the mounds of Bismya. He was ultimately enticed to Constantinople, where he died in honorary confinement. Once rid of him, the Turks succeeded in reducing the Sa'adun Montefich to actual subjection to the government of the Sultan, and Nasr's city is now the seat of a Turkish governor, or mutessarif. It is surrounded on three sides by rice marshes. Across the Euphrates is the desert, and in the distance, some miles back from the river, rise the tower-like ruins of Mughair, or Place of Pitch, so called by the Arabs on account of the bitumen used for mortar by the ancient builders.

Taylor conducted inextensive but successful excavations here in 1854, and from inscriptions found by him, Mughair was identified as the ancient Ur. Since that time nothing has been done toward the exploration of this most important site. The natives have exploited it somewhat as a brick mine, and at the time of my visit thousands of bricks were piled up ready for removal. I found lying on the surface a diorite door-socket of unusual size, bearing an inscription of Gimil-Sin, king of Ur,

which reads: "To Sin, the first born son of Bel, his beloved king, has Gimil-Sin, the beloved of Sin, king of Ur, king of the four quarters of heaven, etc., built his beloved temple." Several stones containing similar inscriptions of the still more ancient king, Ur-Gur, were also lying on the surface. All of these had been more or less defaced by superstitious Arabs. On two more stones the inscriptions had been rendered illegible, and on still another the inscription had been entirely chipped away. I also found several inscribed bricks, but none differing from those already found by Taylor. The large door-socket I carried away with me in order to prevent its utter destruction. As it was too big a load for anything but a camel, it occasioned me much trouble and expense. Properly speaking, it should have been turned over to the Imperial Museum, but the stupidity, obstructiveness, and corruption of local officials rendered such a course impossible, and finally, in order to save it from destruction, it was sent to Philadelphia.

The ziggurat of Mughair has fortunately not been quarried by the Arabs. It is in an excellent state of preservation, as such ruins go, and is the best specimen of this class of construction to be seen in Irak. First comes a large platform, built of unbaked brick, and rising about twenty feet above the plain. On top of this is a rectangular oblong, one hundred and ninety-eight by one hundred and thirty-three feet, consisting of a solid mass of unbaked brick, faced with baked bricks. The corners of this are roughly toward the cardinal points. The side walls are relieved by square half columns. On this stands still another smaller stage, also consisting of a solid mass of sun-dried brick faced with kiln-dried, the whole rising to a height of seventy feet. On the northeastern side of this upper stage are the remains of some sort of entrance or approach to the building which originally surmounted the ziggurat. The calcined condition of the surface of

the upper stage shows that this building contained wood, and that it was destroyed by fire, but more than this cannot be determined. Outside of the ziggurat or high place I traced an enclosing wall, within which must have been the temple courts and chambers, and possibly minor shrines of related deities, the ziggurat itself being dedicated to the Moon, Sin, who is described as the son of Bel of Nippur.

By means of the inscriptions we are able to trace, at least in part, the history of this temple. The first construction of which we now have evidence is that of Ur-Gur, about 2800 B.C., and the lower of the brick stages seems to be substantially as he left it. It was restored by Ishme-Dagan of Isin, and by Gimil-Sin toward the middle of the same millennium, three or four hundred years later. Then follows a restoration by Kurigalzu, a Cossæan king of Babylon, in the fourteenth century B.C., and finally by Nabonidus, the last king of Babylon, 550 B.C. It was one of the most renowned and revered seats of worship through the whole Babylonian and Assyrian period, and is referred to over and over again in the records of the Assyrian kings. That the worship conducted here also affected the ancestors of the Hebrews it is fair to presume from the name of their sacred mountain, Sinai, or mountain of the Moon-god.

But Ur was not only the seat of a great temple. It was a great city of the first political importance, as we have seen, dominating southern Babylonia about 4000 B.C., during the first part of the third thousand B.C., and again toward the middle of the same millennium. It was also a manufacturing centre, as is shown by the great heaps of slag which form part of the ruin-mounds that surround the temple area. Both Ur and its sister city Eridu were also commercial towns, and teak found in the ruins of the latter proves an early connection with India. Eridu, which was at least as old as Ur, is represented by

The Ziggurat at Mughair, Ur of the Chaldees, from the northeast. Photograph of the Wolfe Expedition.

the ruin-mounds of Nowawis, or Abu Shahrein (Father of Two Months), just visible from the top of Mughair on the very edge of the Arabian plateau, in the roaming grounds of the lawless edh-Dhafir. Here Ea was worshipped, the god of wisdom, and the father of mankind, whom some would identify with Yah or Yahweh, the god of the Hebrews. It is with this god that the Babylonian legend of the origin of civilization seems to be connected, according to which a fisherman came out of the Persian Gulf each morning and taught the savage natives of the land the arts and sciences, but above all the art of social life, and each evening disappeared again in the waves of the sea. This is, to be sure, a myth of a familiar type, but the form it here assumed shows that the Babylonians themselves regarded southern Babylonia, and especially the sea coast, as the source of their civilization.

South of Eridu we find mention of but one city, Surippak, the ship city, where the records were buried during the flood. Both Ur and Eridu seem to have been originally located near the sea, if not on it. But at the present time they are one hundred and twenty miles in a direct line from the head of the Persian Gulf. Here we have the means of fixing approximately the date of civilization in southern Babylonia. The rate of alluvial deposit at the head of the Persian Gulf, from the time of Alexander until now, has been on the average about one hundred feet a year. Assuming this as the rate of deposit for still earlier periods, we find that Ur and Eridu would have stood on the shore of the sea about 6000 to 7000 B.C. This we may accept as a *terminus ad quem;* before this the country to which we have traced the stream of civilization was not in existence. Of course it must not be supposed that we can carry back our written records to that period; much less have we done so. The earliest writing found as yet antedates somewhat 4000 B.C., with the exception of a few tiny tablets, which may

be a thousand years or more earlier, but the bulk of the earliest inscriptions belongs to the third thousand B.C. This was the golden period of the south, after which the star of empire travelled northward. I have seen no mound which seemed easier and safer to excavate, or promised richer results than Mughair.

From Mughair I had intended to proceed to Abu Shahrein, which Taylor and Loftus had shown by their excavations to cover the ruins of ancient Eridu. But on inquiry no one knew where Abu Shahrein was to be found. Some, to be sure, professed to know all about it, but on more careful investigation it turned out that they were professing a knowledge which they did not possess, in order not to confess ignorance to the foreigners. The general opinion was that it must be in the region southward, about which no one knew anything except that the edh-Dhafir lived there, and that it was so unsafe that no one would be willing to go with us. We were already suffering from the consequences of exposure and lack of food, and our animals were also pretty well used up; moreover, we had the great door-socket of Gimil Sin to carry, together with all the material which we had picked up at Yokha and Tello, and we could secure no extra animals. Under the circumstances it seemed hardly sensible to go into the dreaded edh-Dhafir country on a hunt after an unknown site. And yet, all the time, it was close at hand, and we had actually been looking at it with our field-glasses from the top of Mughair, for, as I afterwards learned, Nowawis is the Abu Shahrein of Taylor and Loftus, and therefore the ancient Eridu, city of Ea.

Abu Shahrein being out of the question, there now remained to be visited, as the fourth of the great cities of the most ancient period, Warka, the ancient Erech. Samawa on the Euphrates forms the most convenient starting point for this trip, and toward Samawa I directed my march. On the journey we had one rather unpleasant

experience. The weather was intensely hot and my horse foundered. Then one of our pack-mules became exhausted. This delayed us, and when at half-past four we reached a camp of the Bedur Arabs we were compelled to halt there because of these mishaps, and because there was neither food nor water for a long distance beyond. The Bedur did not want us, and sought to excuse themselves from the duties of hospitality, which are of necessity binding toward travellers in a land where nothing can be bought. But we insisted on being fed, and even threatened to seize and kill a sheep if they would not do it for us, until finally, out of very shame, they grudgingly prepared a meal. In view of their unfriendly attitude we asked for a guide, purposing to push on through the night, in spite of the jaded condition of our beasts. They refused to furnish one on pretence that a hostile tribe, the Zeyad, was in front of them. A guard against pilferers, which it is customary for a chief to give, was also refused, and it became plain that they meant to rob us in the darkness. We set up our beds in the open, brought everything into a heap in the centre, tied the horses almost to our beds, and took every precaution to prevent robbery by other means than superior force. But nature proved our most efficient protector. Before I was ready to go to bed an overwhelming storm of wind and sand fell on us from the desert. The Bedur tents were blown down and every man had his hands full trying to save his property from flying off in the hurricane. I was sitting in my chair by the side of my bed when the storm began, and there I was obliged to stay the livelong night, embracing my bed with my arms, and holding my chair by sitting on it. Noorian's position was exactly the reverse. Sleep was impossible, and I whiled away the monotony by a species of singing, which the Arabs seemed to regard in the light of an incantation in connection with the storm. When we saw ourselves at dawn

we were heaps of sand. There was no water to wash with, not even a drop to moisten our dust-choked throats, and nothing to eat until we had reached Samawa almost eleven hours later.

There we were guests at the government house, where we met with a warm welcome from Khalil Bey, the kaimakam, an old friend of the Expedition, the same who had been removed from Diwanieh because he reported that the Arabs burned our camp. It was the last day of Ramadhan, and after the glare and intense heat of the road it was pleasant to sit on his verandah, overhanging the muddy, swirling waters of the Euphrates, with its fringe of graceful palms, and wait for the Beiram gun, signal that the last sun of Ramadhan had set, and the compensating feast begun. To us, the feast of Beiram was a feast indeed.

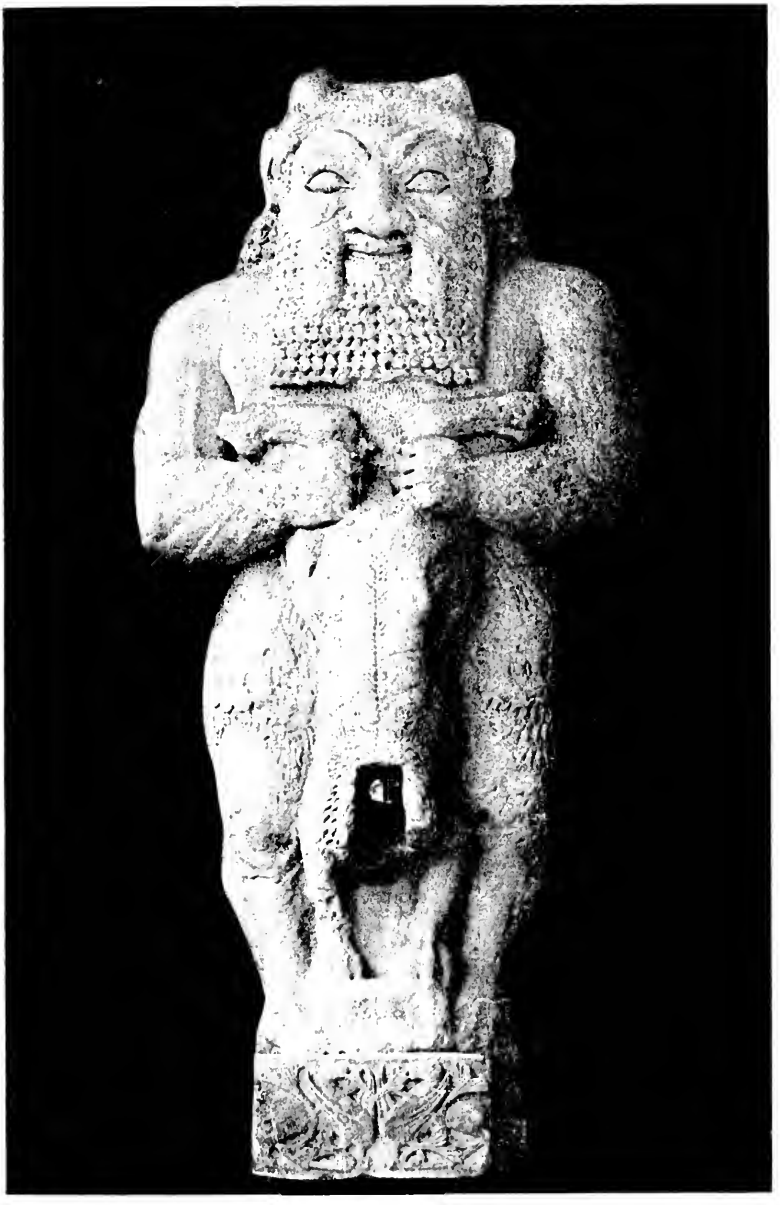
After two days spent in feasting and assisting Khalil Bey to govern his district, we started in a turada for Warka, the ancient Uruk, Erech, or Orchœ. The two zaptiehs who accompanied us were instructed on no account to let us spend the night in the ruins, because Warka is a desolate place and very unsafe, but to go to el-Khudhr. After starting we over-persuaded them. Leaving the Euphrates about half-way between Samawa and el-Khudhr, we crossed a great swamp, spreading out like a sea, and full of islands of submerged tamarisk and thorn brush, abounding in wild boars and water fowl. It was late in the afternoon when we came to camp on the eastern edge of the marshes, a mile and a half from the ruins. It was a night of misery, not because of the Arabs, of whom our kaimakam had been afraid, but because of the mosquitoes and sand flies. I was the only one who made any pretence of sleeping. The rest wandered up and down the whole night, or gathered twigs and made smoke. Under the circumstances we were early at the ruins.

Ancient Erech once disputed with Nippur, Ur, and Eridu the primacy of southern Babylonia. It was the special seat of the unclean worship of Ishtar, or Astarte. In connection with the temple of this goddess there was a library of inscribed clay tablets, from which Ashurbanipal's scribes derived the originals of many of the tablets which they copied for the royal library at Nineveh, and especially for the famous series of Izdubar, or Gilgamesh, tablets, in the eleventh of which is contained the Babylonian flood story. This series constituted an epic in twelve books, based on a nature myth, and arranged according to the signs of the zodiac, with Gilgamesh as the hero. In the form in which we have it from the scribes of Erech, local coloring is given by special reference to the worship of Ishtar, as practiced at that city. The revolt of Erech against Elamite domination is also woven into the story, reminding one of a Burgundian form of the Nibelungen Lied, in which incidents of Burgundian history are interwoven with the original Teutonic myth.

The deeds of Gilgamesh, the hero of the myth, are supposed to have furnished the original for the labors of the Greek Heracles. In connection with this theory it is well to recollect that the Phœnicians, as well as the Hebrews, owed their origin and their mythology to southern Babylonia. It was through them, if at all, that such myths reached Greece. Much interest, therefore, attaches to a colossal, hitherto almost unnoticed, figure of the Phœnician Melkart, found by Cesnola in Cyprus, and now in the Imperial Museum at Stamboul. It represents the demi-god holding a lion by the hind legs, in much the same attitude in which Gilgamesh, or Izdubar, is represented on Babylonian seals and Assyrian monuments, and is similar to the Assyrian colossal figures of Gilgamesh of the eighth century B.C., except for the characteristic heaviness and ugliness of the Phœnician type. Gilgamesh and Melkart are evidently confounded,

if not identical, and we know from Greek remains that Melkart and Heracles are similarly confounded, so that it is pretty clear that the myth of Gilgamesh has been transferred to Heracles. Gilgamesh is also by some identified with the Nimrod of the Hebrews.

Loftus conducted some excavations at Warka in the fifties, since which time the mounds have remained untouched. Probably his most important discovery was a large necropolis, where the bodies were buried in clay coffins piled one over the other to a depth of sixty feet. But his excavations were on too small a scale to unearth the most valuable treasures of the earlier periods, which lie, as at Nippur, at a great depth, covered by an enormous mass of débris, for Warka is one of the three or four very largest ruins in the country, and represents a city inhabited from the earliest period until long after the commencement of our era. The highest mound is Abu Berdi, Father of Marsh Grass, which is about ninety feet in height. This consists of a solid mass of sun-dried brick, with a layer of reeds between each twelve courses, whence the name. It represents the ziggurat, or high place, of the ancient temple of Ishtar, and stands toward the northwestern side of a rectangular plateau. The whole so closely resembles in size, arrangement, and outward appearance the mound in which we discovered the temple of Bel at Nippur that it is safe to assume that the temple of Ishtar at Erech and the temple of Bel at Nippur were on the same general plan. Besides Abu Berdi there are two other very prominent hills at Warka, in both of which traces of Loftus' trenches are still visible. On one of these ruins of a structure, apparently of the Sassanian period, and therefore later than the Christian era, were still exposed. I am not sure that I found Loftus' necropolis, but while searching for it I unearthed a couple of slipper-shaped coffins of half-baked clay, covered with a thick blue glass enamel, and similar to



Melkart holding a Lion's Skin, Colossal Stone Figure found by Cesnola at Cyprus.
Now in the Museum at Constantinople.

the coffins from Nippur, except that instead of human figures these two were ornamented in arabesque. Doubtless there are great treasures awaiting the digger at Erech, but his task of excavation will be a difficult one, because of the lack of water, the sand and dust storms, the insecurity of the region, and the vast size of the mounds. No excavations have been conducted at Warka since Loftus' time, but it is still one of the principal sources of supply for seal cylinders and other smaller antiquities, which the Arabs find and dispose of to dealers, who ultimately send them to Europe. It is the Arab women who find most of these while searching for ornaments for their own persons. After a rain-storm they can be seen in great numbers traversing the ruin-mounds, bent down so close to the ground that they almost seem to be on all fours. When they find signs of a coffin they dig a hole with their fingers, as deftly and savagely as real hyenas, tear out the contents, ruthlessly scatter the buried bones, and appropriate the ornaments and utensils buried with them. Every woman wears strings of beads and curious odds and ends gathered by her own resurrectionary industry, or bequeathed by ghoulish ancestors. Gold objects are usually sold in the towns and melted down, while the seal cylinders, so highly prized by archæologists, are commonly sold to wandering Jewish wool merchants.

As at Nufar, there are several smaller mounds around Warka, outside of the ancient wall line, representing suburbs, and what the Hebrews called "daughters." Prominent among these are the two small hills called Owlad Ibrahim, Sons of Abraham, for Arabic tradition connects this whole region with the Father of the Hebrews. A dozen miles away, south of east, lay the important city of Larsa, now the mounds of Senkareh, where Shamash, the Sun-god, was worshipped. Beyond this still, Loftus found the ruin-mounds Tel Sifr and Medain, also representing ancient cities.

In ancient days this whole country teemed with a vast population, and was dotted with innumerable cities, of which I have only mentioned a few of the more important. Another class of ruins, the ruins of the ancient canals, I have not noticed at all, although they are, if possible, more numerous, more striking and more characteristic than the ruins of the cities. They run like great arteries through the country, lines of mounds, ten to thirty feet high, stretching in all directions as far as the eye can reach. Once they carried life-blood to every part of the land, for the life of this country is water. Give it canals and reservoirs and dams to distribute and control its water-supply, as Nebuchadrezzar and other great kings did, and it is capable of supporting by its enormous productivity an incredibly large population. Break its dams, choke its canals, and it lapses into poverty and barbarism. Such is its present condition. There is a very scanty population, largely in the bedouin state. There are few towns, and those without industry or commerce. There is no irrigation, excepting of the rudest sort, close to the river banks; and the land is alternately inundated and parched. There is no government excepting heavy, oppressive, and irregular bribes and taxes. There is a general state of insecurity. There is not a road in the whole country, and no means of locomotion; and the most primitive and obstructive ignorance prevails everywhere. The first parent of our civilization is in his decrepit second childhood, but in the Tigris and Euphrates exists for him a fountain of perpetual youth. Some day water from that fountain will be held to his shrivelled lips, the life-blood will course once more through his atrophied veins and arteries, and he will rise to a new life, strong and vigorous as when in days of yore he begat nations and knowledge together.

CHAPTER XII.

NEJEF AND KERBELA.

Official Life—Unpaid Salaries—Treatment of Prisoners—Objections to Railroads—The Plagues of Irak—Bitumen Deposits—A Relic of Heathenism—Credit and Jews—On the Tow Path—The Marshes—*Assyrium Stagnum*—Persian Sacrifices—Pilgrim Marriages—Sunni and Shiah—Hira and Hauran—Arabian Invasions—Estates of the Sultan—Donkeys—Brigands—Ali's Shrine—Noorian a Pilgrim—Burial Customs—Kufa—An Arab Legend—The Story of Tarfa—Near the Montefich—Monitor Lizards—Treasuries of Nejef—Shrine of Husein—Kerbela—A Prohibition Stronghold—Emir of the Haj—More Marshes—Hindieh Dam—A Tooth Brush—Arab Marriages—Arab Character—Gan Eden—Kufas.

AT Samawa on the Euphrates my trip through the Fatherland of the Hebrews and of civilization had ended, and from Samawa began my journey to the sacred cities of Nejef and Kerbela, those goals of pilgrimage for pious Shiites alike in life and in death. But between the two journeys I enjoyed a brief period of much needed refreshment as the guest of Khalil Bey, kaimakam of Samawa, the faithful old friend who, as kaimakam of Diwanieh, had refused the year before to make a false report on our doings at Nippur, and had been transferred to this inferior post in consequence.

The government house in this outpost of civilization was a very primitive affair, and life was simple and patriarchal. Everything was transacted in one room. There we drank our morning coffee, received calls, attended to business, smoked cigarettes, drank uncounted

teas and lemonades, ate our mid-day meal, repeated the morning's routine until sunset, ate our dinner, and held a social gathering until bedtime. I say we, for we all governed the town together, and everything was done in common. It was an informal sort of parliament, in which every one seemed entitled to speak who felt so inclined. People came and went. Sometimes the kaimakam, or the kadi, or some other pious man, called for a rug and a jug of water, and went out on the balcony to say his prayers. The chief business, when we had any, seemed to be claims against the government, which were invariably rejected on the ground that there was no money in the treasury to pay salaries, much less outside claims. Among others, an Austrian, Dr. Blau, formerly military physician in the Turkish service, now dealer in antiquities, long resident in Samawa, argued his claim before us in vain. One evening an Indian Mussulman, on a pilgrimage to the sacred cities, appeared before the court in a half-naked condition to complain that the zaptiehs had robbed him of all his money and most of his clothes. Another night some mutinous zaptiehs burst in upon us and demanded payment of some of their arrears, declaring that they had no money with which to celebrate Beiram.

The condition of these men was in no wise peculiar. As a result of two year's questioning of the numerous zaptiehs with whom I came in contact, I found that they received payment on an average of five or six months out of the twelve. They are the police, the tax-gatherers, the messengers, the letter-carriers and general factotums of the Government in the provinces. Their nominal wage is about four dollars a month, with a small allowance of barley bread, and, if they are mounted, an additional allowance of barley and forage for their mules or horses. But in spite of the small salaries, the position of zaptieh is in great demand. One on-bashi (captain of a

hundred), told me that thirteen years before he had paid sixteen mejidies (fourteen dollars) as backsheesh to secure his promotion to the post of chaous, or serjeant. Some one had "swallowed" the money, and he had never been promoted. He naïvely explained that the serjeant had better opportunities than the on-bashi or corporal for appropriating a share of the taxes, so that under favorable circumstances in the tax season he could earn ten liras (forty-four dollars) a month. However, the corporal, and even the private, have their pickings, so that to be enlisted at all a man must pay a bonus of eight dollars, or about four months' actual wages. Of course they could not live on their wages, our corporal said, even if they were paid. This man, I may add, was unusually nice in all ordinary relations of life, and very pious. The testimony of all the others whom I questioned corroborated his general statement. As a natural result of such a system, the zaptiehs rob the Government on the one side and the people on the other, levying on the latter very much at will, as I had occasion more than once to observe. The condition of the higher officials is substantially the same.

One day, under Noorian's guidance, I visited the prison; two rooms and a court in the government building, where the prisoners live, finding themselves, but doing no work. The better-to-do prisoners had gone home to celebrate Beiram, having furnished bondsmen to answer for their reappearance, and only the penniless and friendless wretches remained behind. They were glad to see us, and eager to tell us their histories. Of course, they all insisted that the kadi was corrupt, and justice a purchasable commodity which they could not afford. All told us their stories. One was imprisoned for debt, two for rape, one for shooting a man, and one for theft. All but the debtors protested innocence, in which they were not unlike the prisoners in our own jails. All declaimed

also against the delays of justice, claiming that they had been in prison untried for months. There was little difference in this regard between the Turkish jail of Samawa and the old Tombs in New York. What were the offenses of the bail cases, and how long they remained untried, I did not ascertain.

One night in our little parliament, after all had tasted coffee, and the kaimakam had tossed cigarettes to the more distinguished among us, the talk fell on steam and electricity. Both the kaimakam and the kadi deprecated the construction of a railroad from Constantinople to Baghdad, holding that it would injure the morals of the people, and make the country an easy prey for the foreigner. It was railroads and telegraph lines, they opined, which had enabled Germany to conquer France. Had France wisely refrained from building either she would still be unconquered. Noorian felt called upon to show the kadi his mistake, and impress upon his mind the backwardness of Turkey in comparison with other lands. The kadi sulked, then arose in dudgeon, and the meeting broke up in a huff.

Another night we were unpleasantly reminded of the proximity of the desert. After the universal custom of the country, we were sleeping on the roof, when a sand storm arose, nearly carrying our clothing into the river, and compelling us to take refuge in a little room with tight closed doors and windows, where we suffocated for some hours before it passed over. Owing to the heat of the climate, a night within doors in Irak between April and November is almost unendurable. In July, 1889, the average daily maximum temperature at Baghdad was 114° in the shade, and in 1890 we encountered the same temperature more than once in June. The kaimakam, who was a native of Trebizond, on the Black Sea, suffered sorely from this heat. He also complained bitterly of the insects, and the snakes, scorpions, and lizards which

crawled over his walls and dropped down from his ceiling when he tried to take an afternoon siesta. I did not find the heat so trying, owing to the extreme dryness of the atmosphere and the constant wind. Serpents and scorpions occasioned me no trouble, and the fleas became a matter of indifference; but the flies were the most terrible pest I have ever been called upon to endure. The countless myriads of tickling, buzzing, biting things, from which there was no escape from dawn till dark, in house or field, in motion or at rest, irritated me to such an extent that I often seriously feared lest I should temporarily lose control of my senses and commit some act of wanton violence, or run amuck, like the Malays. The common flies were the worst pests because of their permanence; the sand flies, which, in themselves considered, are far more terrible, were fortunately only temporary crises. These sand flies of the Euphrates are very small, fragile looking insects, apparently consisting of little more than wings and stings. As a protection against them only the very finest netting is of any value, and when they come in large numbers nothing seems to avail. They do not confine themselves to the exposed portions of the body, moreover, but find their way through or under all covering. Their bite is peculiarly venomous, and the irritation is accompanied with a sharp, burning sensation. They sometimes descend upon you for a night or two at a time in vast numbers, almost like a cloud. I recall the attempt I made to dress myself on one such occasion. They had penetrated the sheets or under the sheets, tightly as I had fastened my bag bed at the mouth, and finally drove me out. There the main army was waiting to devour me, and the agony of those three minutes before I could cover myself was almost insupportable. The physical pain was so great, that it was only by the strongest effort of the will that I could control myself sufficiently to put my clothes on, which reason told me was the only safe

course. I wanted to run and throw myself into the river. And yet I believe that I do not suffer from them as much as most people.

However, we were much less exposed to all these pests in the Government house at Samawa than on the march, and our visit to the hospitable kaimakam was a period of real recuperation and enjoyment. Samawa is a place of about 7000 people. In old times the town of this name lay on the Ateshan canal, but that site was long since deserted, and the present town lies on the banks of the Euphrates, surrounded by palm groves and gardens of willows, pomegranates, apricots, oranges, lemons, almonds, and cucumbers. The latter is the great fruit of the country, and in many places and at certain seasons the only fruit to be had. For days at a time we almost lived on cucumbers. On the river front before the Government house there was considerable life, and many boats coming and going, especially pitch-smeared boats from Hit, loaded with bitumen and stones. A battalion of soldiers is stationed at Samawa, and the Turkish uniform was much in evidence, especially on the bridge of boats, at one end of which stood the barracks and at the other the serai. The bath at Samawa was supplied from a spring of sulphurous water, and there is another similar spring at Ain-el-Daoud, opposite el-Khudhr. Along the edge of the Arabian plateau, and wherever that plateau is deeply seamed by cañons, or broken and faulted by pressure from beneath, one is apt to find bitumen, naphtha, or sulphurous springs, and I presume that borings will some day develop vast deposits of mineral oil, bitumen, and the like, underlying much of that barren plateau.

At last the day came when our good kaimakam was obliged to set out on a tax-collecting expedition to replete his empty treasury, and we chose the same time to commence our pilgrimage to the sacred sites. But at the very outset we were obliged to omit from our itinerary

one sacred spot of a most interesting character, el-Khudhr. This is a grove of the same description as the once famous Daphne, near Antioch, and is a relic of heathen days, when such sanctuaries were not uncommon through the East. It serves as a place of asylum, where all life, even that of birds and beasts, is inviolable. Some members of the British survey, in 1838, not knowing the nature of this grove, and seeing game there in abundance, shot some of the sacred animals, in revenge for which desecration the outraged natives attacked the expedition and tried to massacre its members. The name, el-Khudhr, the Evergreen, is also applied by Moslems to Elijah, and accordingly he has come to be regarded as the patron and founder of this old heathen sanctuary. Doubtless I should have visited this spot, which I had seen from across the river in my journey from Mughair, but it lay southward; Nejef and Kerbela lay in the opposite direction; to visit it would have involved a delay of two or three days, at least, and time was growing precious. Moreover, I had used up all my money, and as there were no Jews in Samawa, I could not get any more, for where there are no Jews there is no credit, and bills and drafts are useless. At Nejef I hoped to meet Shaoul, the Jew of Hillah, to whom I had written. Under the circumstances, it was desirable to get there as soon as possible.

As the land route to Nejef was neither good, safe, nor interesting, and no mules for our baggage could be had in Samawa, we decided to go by boat, and engaged for the purpose a large turada, on which we erected a hut of mats to serve as a protection against the sun. It was an unlucky venture, as the sequel proved, for we had the wind against us during the whole journey, and were compelled to resort to the tow rope, so that it took us four days instead of the promised one and a half.

Starting up the Euphrates, about two hours above

Samawa we left that river and entered the Shatt-el-Ateshan, or river of the Ateshan. This is the termination of a series of canals constructed or restored in the time of Nebuchadrezzar, and again in the time of Alexander the Great, to carry the Euphrates water along the edge of the Arabian plateau, and thus fertilize the barren tract between the river and the desert. Unfortunately, the land there proved to be slightly lower than the land about the old bed of the river, so that at the present day a large part of the water goes to form great marshes, only the smaller part pouring back again through the Ateshan into the Euphrates proper. Nevertheless, the Ateshan at the time of my visit was larger than the old bed of the Euphrates above the junction, and the current was both swift and strong.

It was tedious work towing up against this stream, and there was nothing to see. On the south side, a short distance away, were the bluffs which form the limit of the Arabian plateau; on the north lay the marshes of Oueine. There were no villages and no traffic, what few boats there were having been impounded at Shenafieh, the one town on the canal, to carry brick and stone for the Hindieh dam. It was afternoon of the second day when we reached Shenafieh, and there we lay the remainder of that day and the whole of the following day, because a strong west wind was blowing, and our primitive boatmen were afraid to venture on the mighty sea of Nejef; for the water was deep, they said, and great waves arose. They told us dire stories of disaster, and of the recent loss of sixteen persons on that dangerous piece of water; but it turned out that they lived in Shenafieh, and wished to take the opportunity to visit their families. They left us and the boat and went their way, and we had to await their return. Shenafieh was an extremely uninteresting village of mud huts, and very hot, so that, clothed in my pajamas and an Arabic abbah, I took

refuge in a sort of cellar to a coffee-house, where the water jars were kept, and played backgammon the greater part of the day. A native brought us some Parthian seals, Kufic coins, and a silver coin of Charles the Third of Spain. It was interesting to observe that the antiquities which turned up here were all late, but, as for purchasing, I was absolutely without money, and could purchase none of them, late or early.

The next day, after another long delay of caution at the head of the Ateshan, and many misgivings because of the strong head-wind, we at length found ourselves embarked on the sea of Nejef. In the maps this sea was represented as consisting of two parts, separated by a strip of land, the eastern part marsh-like and dotted with islands; the western a deep basin of water stretching to the southern gate of Nejef itself. This latter part was known to the geographers as the *Assyrium Stagnum*, and was regarded as a real inland lake, occupying a natural depression in the surface of the Arabian plateau, while the eastern part was treated as a mere temporary inundation, due to lack of dykes. I was greatly surprised to find that during the last few years the deep western part has been drained entirely dry, in consequence of which boats can no longer go to Nejef. The shallow eastern half is still as described in the maps. Part of this eastern half is really nothing but a marsh, dry in the autumn and winter, but during the spring and summer a shallow sheet of water with numerous small islands showing above the surface. On one of these, somewhat higher than the rest, I observed a ruin mound, Tel Trum, with the remains of a large brick structure belonging to the period of the Arabs of Hira, or Kufa.

Toward evening, after sailing and poling for ten hours and a half across the sea, we landed at a reed village with a ruined mud fort on a tiny islet called Umm-er-Roghlat, Mother of the Marsh Grass. Several boatloads of Persian

pilgrims on their way to the shrine of Ali had landed here to spend the night, and were preparing delicious tea on the shore. To some of these our boatmen sold for a rupee (thirty-five cents) a miserable sick sheep which they had picked up a couple of days before, and which I had refused to buy from them. It was bought to be sacrificed, or sacrificially eaten, at Ali's tomb at Nejef, a pious way of cheating the saints with cheap gifts, which I found not uncommon.

There was an unusually large number of pretty women among the islanders, but all complained that they were beaten by their husbands, a complaint which, if investigated from the other side, might prove to be connected with the lax morality prevailing along the pilgrim routes. Beside the ordinary bad practices of the country regarding marriage, the Shiite Moslems have in connection with their pilgrimages a curious practice of temporary marriage. The pilgrim marries a woman for a day, week, or month, as the case may be; the price and the time are agreed upon beforehand; the marriage is regularly performed by an imam; at the end of the stipulated time the man divorces his temporary wife, and she is ready for another contract of marriage. The orthodox, or Sunni, Moslems do not practice this sort of temporary marriage, but they also have in regard to female pilgrims a curious rule. No female without a husband may make the pilgrimage to Mecca. A pious widow desiring to become a pilgrim must take a husband for the occasion. She, or her family, make a financial arrangement with some poor man or dependent to marry her, make the pilgrimage, and divorce her on their return. This marriage must be actual and not ceremonial. Sometimes, after the return, the man takes advantage of his position, and refuses to divorce the woman. This constitutes an awkward situation, for among Mohammedans the man alone has the right of divorce. This right is arbitrary, and he can divorce his

wife for any or no cause. If he says the fatal words, the marriage tie is severed, and she must go. However, they can marry again the next day. This may be repeated three times, after which she must marry someone else, and be divorced from him before her first husband can repossess her. Some arrangement must then be made with another man to marry her for a day or two; but here also is the awkward possibility that the *ad interim* husband may break his agreement and not divorce her at the stipulated time.

The difference between the Sunni, or orthodox Moslems, and the Shiite, or Persian sectarians, is in one way the same as that between the Pharisee and Sadducee in ancient Judaism; the former accepts the Koran plus tradition, the latter the Koran only. But in other directions the comparison fails. Among Mussulmans it is the party of tradition which is the more liberal in the matter of contact with infidels. A Sunni may dip his fingers with a Christian in the common dish; the Shiite regards food touched by a giaour, or a vessel out of which a giaour has drunk, as polluted. The Shiites are doctrinally tainted with pantheism, and hold to incarnations of the deity. For all intents and purposes, they set Mohammed's cousin, Ali, before Mohammed himself, as such an incarnation, and hence show peculiar reverence to the tombs of Ali and his son Husein, whom they regard as a martyr. Naturally, since the tombs of both Ali and Husein are in Irak, the natives of that region, with few exceptions, are ardent Shiites, and the political sympathies of the country are with the Persians and against the Turks. Indeed, as this is a family quarrel, the Shiites hate the Turks more than they do the Christians, in spite of the uncleanness of the latter.

As Umm-er-Roghlat was a very small island, where we could get no coffee nor provisions of any sort, while the islanders, pilgrims, and fleas filled every available

spot, we concluded to re-embark and push on by night to the edge of the sea, where, on a Sennieh of the Sultan, there was said to be a farm of our friend Hajji Tarfa, chief of the Affech Arabs. About ten o'clock we stuck in the mud or sand opposite a point called Ras-el-Ain; the boatmen waded about in every direction, but found no channel, and while we were thinking how and in what direction to get off we all fell asleep and slept till morning.

When I awoke we were ascending the Meshrab canal, to the north of the sea of Nejef, being towed against a very strong current. On our right ran a low, long range of hills, called by the Arabs Haswa, that is pebble-hills. By an error of understanding these were given in the maps made from the old English surveys as a ruin-mound named Ashaya. A little higher up on the other bank, I saw what looked to me like some small pebble-hills, but the Arabs insisted that they were the ruins of the famous city of Hira. Unfortunately, owing to the fluid nature of the intervening region, I could not well get at them to determine the question. Hira was the capital of a state founded by Arab emigrants from southern Arabia in the early centuries of the Christian era. A similar state was founded at or about the same time in the Hauran, south of Damascus, and the wonderful rock-cut cities and black basalt ruins of that region testify to its wealth and importance. It became an Arab outpost on the edge of the Roman empire, while Hira played a similar rôle toward Persia.

Central and southern Arabia have from time immemorial been a breeding ground from which tribes and nations have poured northward. We find evidences of such movements in the ancient Babylonian and Assyrian records. Sometimes small tribes roamed into Babylonia, continuing for a longer or shorter period to preserve their nomadic state. Sometimes it was the movement of a nation, pushed out of its original abode by causes of

which we are ignorant. Such, I imagine, was the Chaldean invasion, against which Sennacherib and Ashurbanipal battled so strenuously in the eighth and seventh centuries before Christ. Such was the movement of the Arabs who founded the kingdom of Hira. The greatest of all these Arab migrations, and the one which most profoundly affected the history of the world, was a religious movement—the Mohammedan invasion. But it is not always realized that since that invasion, and even since the Turkish conquest of Mesopotamia, within the last two or three centuries, hundreds of thousands of Arabs have poured northward, overrunning a great part of Mesopotamia. It is with good cause that the Turks view Arabia with the gravest apprehension. We are apt to regard it as an insignificant and almost uninhabited desert; but in reality it plays the same rôle for the Euphrates and Tigris valleys, and for Palestine and Syria, which Scythia once played toward Europe. It is a mysterious country, a region always seething, and which may at any moment pour forth a flood of conquering warriors.

Somewhere toward noon we landed at Abu Seheir, or Father of Stones, a small new village on the edge of the Arabian plateau. The houses were built partly of a mortar-like limestone, which underlies the sandy and pebbly surface of the plateau, and partly of bricks from the ruins of the Arabic period; for here, excepting the canals, one finds no traces of the early Babylonian times. There were abundant palm groves everywhere, and a general aspect of prosperity, in striking contrast with the usual barren and miserable conditions of the country at large. It proved to be a Sennieh, or private domain of the Sultan. Under the recent administration of the privy purse his Majesty has acquired immense tracts of land in all the Asiatic provinces of the Empire; not to speak of the numerous valuable concessions for steamboat monopolies,

quays, mines, and the like. In the vilayet of Baghdad alone, he is said to own more than one half of all the cultivated land. As his property is not subject to taxation, this has seriously embarrassed the finances of what was formerly the most productive province of the Empire; but, on the other hand, his estates are managed with an energy and foresight which are conspicuously wanting in the general administration of the country, and are a real boon to his tenants. Canals are dug for irrigation, dykes built to prevent innundations; the tenants farm the land on half shares, and in case of distress they are sure of some degree of consideration, or even of assistance in the shape of a loan of seed, cattle, and the like. Wherever in Irak you see a particularly prosperous village, you may conclude that it is the private property of the Sultan.

Resting through the heat of the day, toward evening we hired some donkeys and started for Nejef, the golden dome of which was visible to the northeast. When I am not riding a donkey I have the greatest sympathy for the race. They appear the very incarnation of patience, weary diligence, and long-suffering. Their sad faces bespeak an existence so joyless that I could weep to look at them. But mounted on a donkey the view changes. Such causeless perversity, such total aversion to a proper progress cannot be found in any other beast except the crooked camel. They are not weary, for they can run rapidly where you do not want them to go, and their melancholy air of being imposed upon proves to be largely due to a constitutional objection to oblige. It is no use beating a donkey, it only gives him the opportunity he desires of appearing abused. Take out your case-knife and prick him gently behind. It sounds cruel, but it is true kindness. He sees that you have read his heart, and you have no need of pricking him a second time. His listless misery vanishes at once, and his

better nature asserts itself—so long as you hold the knife ready for use and no longer.

Our course lay along the edge of the plateau, by the side of the depression once occupied by the sea of Nejef. We passed a couple of ruins of the Arabic period, one of them, Te'airazat, occupying the place assigned on the map to the ruins of Hira. This is, I presume, the real site of that city, but we could not stop to examine the place, for we were trying to reach Nejef before the city gates were closed for the night. Darkness overtook us, thanks to the door-socket of Gimil-Sin from Mughair, still a long way from our destination. However, our donkey drivers consoled us by the information that there was a hole in the wall through which we could enter without trouble. Suddenly, out of the sand hills three men with long Arab flint-locks rushed at us, while a fourth with a donkey to carry off the plunder remained behind. They evidently mistook us for a guileless caravan of Persian pilgrims bringing corpses to be buried at Nejef, and the money to bury them. We called to them, but they returned no answer and continued to advance. Then we dismounted and showed them the muzzles of three Winchesters and a double-barrelled shot-gun. With that they would have bade us good-night, saying that they were on their way to visit a plantation which they had in that region. But our men stopped them, took away their guns and beat them, only the man with the donkey escaping. Not at all sure of my ground, and being uncertain of the advantage to a Christian of bringing three pious Moslem brigands as his prisoners into a fanatical Moslem sacred city, I impotently let matters take their own course. So my men beat the robbers and cursed them, and then returned their guns and let them go to rob the next poor unprotected gang of pilgrims.

A little later, as we approached the gate of the city, several men sprang from among the tombs and ran toward

us. Our zaptieh called out that these, too, were robbers, but when we had made ready to resist them we found them to be welcome friends, Shaoul, the Jew of Hillah, bringing us money, and some of our former laborers giving him escort. He had heard from earlier arrivals of our presence at Abu Seheir, and persuaded the kaimakam to keep the gate open to admit us after dark. And so, after all, we entered the sacred city by the gate, and not through a hole in the wall, for which privilege we had to pay accordingly.

The next morning at sunrise I saw from the roof of the khan the beautiful golden dome and minarets of the mosque of the tomb of Ali, next to Mecca the most sacred spot of the Moslem world. I expected to find a city so fanatical toward strangers that I could not traverse the streets without an escort. Such were the conditions at the time of Loftus' visit forty years before, and no account of any later visit has been published. But all has changed since then. Although Christians may not now live in the city, yet hatred of the Turks has at least helped to make the people look with favor on the "Franks," for in the latter both the Persians and the Arabs of Irak see their only hope of deliverance from the Ottoman yoke. I could wander through the city at will, and only the mosque was forbidden ground. Even this I photographed standing in the gateway, but this photograph, like all the others which I took on this trip, was destroyed by the inexplicable tampering with my camera in Baghdad. Noorian and Artin, although Christians and Armenians, were smuggled into the sacred precincts by our Arabs, the latter as a Persian, the former as a Turk from Stamboul. Noorian reported that at the entrance they made him kiss the chain across the gate, and both the doorposts. Then he entered the court, which was surrounded by alcove-like rooms, open in front, such as one finds in all the great khans on the Persian pilgrim routes. The

walls were decorated with tiles and small mirrors set in silver. Out of this court arose two minarets, plated with finely beaten gold from the height of a man and upward. In front of him stood the shrine or ziara, surmounted by its golden dome. He put off his shoes and entered this, escorted by soldiers and guided by a Se'id, a green turbaned descendant of the family of the prophet. Within there was a sight of barbarous magnificence. The walls and roof were covered with polished silver, glass and colored tiles. The resting-place of Ali was represented by a silver tomb with windows grated with silver bars, and a door with a great silver lock. Inside of this was a smaller tomb of damascened iron work. He was made to take hold of the grating of a window and the Se'id prayed in a sort of poetry, Noorian repeating after him, somewhat thus: "Ali, prince of believers, righteous man of God, I have come from a distant place, over mountains and deserts and valleys, through perils great and manifold, on behalf of my father, on behalf of my mother, on behalf of my sisters, on behalf of my brothers, on behalf of my wives and children, on behalf of my health, on behalf of my wealth, to entreat thy intercession to obtain my desire." The whole ended with a petition that his pilgrimage might be acceptable to God. Men were hanging to the bars of other windows, and even to the lock, praying vehemently, begging for an entrance into an inner communion with God. Some three or four more prayers were offered in different parts of the building, including one toward Mecca in respect for Mohammed.[1] But Mohammed was, in fact, subordinated to Ali, according to the usual Persian practice. Noorian was too nervous to notice things as fully as he wished, and our men also were nervous and

[1] It should be said that the Imam who escorted Noorian was also a priest of Ishtar, and in the intervals between prayers was offering, for a suitable consideration, to provide him with a woman.

hurried him. He purposed making another visit, but the following day a Baghdad merchant recognized him on the street, and after that the risk was too great, for if he had been detected he would surely have been killed. However, he had accomplished the rare feat of penetrating and exploring this famous mosque.

Nejef is a thrifty-looking city of some twenty or thirty thousand inhabitants, surrounded by a wall, which is beginning to fall into ruins. Wall and houses are both built of bricks from the ruins of Kufa, the quondam capital of the caliphate of Ali, and every day you see numbers of donkeys bringing bricks from that site. The water at Nejef is the best I drank in Irak. It is brought into the city by an underground aqueduct from the Henadieh canal, a few miles to the north, and what is not consumed by the population passes on to water the gardens now being planted in the deep, dry bed of the former *Assyrium Stagnum*, eighty or a hundred feet below the level of the town. There are also wells, but the water from these tastes of lime. Outside of the walls, over the sterile, sandy plateau, stretch great fields of tombs and graves, for Nejef is so holy that he who is buried here will surely enter paradise. Among other graves, I saw that of Mekota, the Affech chief who burned our camp the year before. Some of the bodies are brought from great distances. Caravans of pilgrims are constantly arriving, generally from Persia, bringing corpses in all stages of decomposition. Pestilence would seem to be the inevitable consequence; nevertheless, Nejef and the similar Kerbela remained untouched by the cholera plague of 1889. Physicians who investigated the phenomenon reported that the natives had become so indurated, or inoculated, by constant habitation in an infected atmosphere that cholera appeared to have no effect whatever.

In old times people used to be buried anywhere within

the walls, only those who could not, or would not, satisfy the greed of the imams remaining without ; but these conditions have been reformed, and, with the exception of a small number who obtain interment at a great price in the vaults beneath the tomb of Ali, the departed are now buried without the walls. Funerals are constant at all seasons; both of those who have been brought to Nejef as corpses, and of those who have come there to die in the odor of sanctity. One night on the balcony of the khan one of the latter sort died close beside me. I became aware of it in the morning, when I was awakened by a request to me to move my bed so that they might carry out the corpse.

From an archæological point of view, the practices which I observed at Nejef were of the greatest interest, for, almost in detail, they illustrated the customs of the early Babylonian period. The same rôle which is now played by Nejef, Kerbela, and such lesser shrines as Imam Jasim near Hillah, was played in the old times by Erech and other sacred cities. To these the dead were brought for interment from great distances. They seem to have been brought uncoffined, as is frequently the case at the present day, wrapped in reeds and mats. Clay coffins were purchased on arrival, or large bitumen water-jars, in which the bodies were buried. The great bulk were interred without the city walls, but some found resting-places nearer the sacred precincts, and their remains are strangely mingled with the ruins of houses, temples, and public buildings. Then, as now, contractors brought down in large numbers the corpses of those whose friends could not themselves transport them. These were often buried in quantities together in one tomb, or tumbled pell-mell into the graves and tombs of others. The same practices prevailed during the Babylonian, Persian, Parthian, and Sassanian periods which now prevail under the Moslem domination, and if the

shrines have shifted their localities, the sacred traditions of burial in the soil of Irak have been preserved intact.

In booths near the gates of the mosques in Nejef and Kerbela I found pilgrim tokens for sale. These were, for the most part, small, round, rectangular, or octagonal objects of clay, often decorated with a hand, or with a circle for the forehead to touch in prayer, and reminded me of the ancient pilgrim tokens which I found in a booth before the gate of the great temple of Bel at Nippur. It was only another instance of that remarkable persistence of custom in Irak which over and over again enabled our Arab workmen from their own present use to explain the meaning of an ancient object by which I was hopelessly mystified. They were using the same objects which the Babylonians had used four thousand years ago, and presumably, so far at least as the common people are concerned, they were living the same life, excepting only for the modifications introduced by the use of coffee and tobacco.

One day we visited the site of ancient Kufa, one and a half hours east a little north of Nejef, on the edge of the Hindieh canal. There is a large mosque here, on the site where Caliph Ali used to worship; but the once important city has vanished from the face of the earth, the remains of the renowned capital of the living caliph having furnished the material for the city of the dead which has sprung up about his tomb. At the beginning of the century travellers report extensive ruins still in existence, but these have been carried away, and only a few foundations and low mounds may still be seen near the mosque, or scattered among the palm-groves and huts of the miserable modern village. Even these are rapidly disappearing, to furnish building material for the inhabitants of Nejef. On the shore of the Hindieh, or rather at the time of inundations on an island in the stream, lies a ziara of Nebbi Yunus, marking one of the several spots at

which, according to Moslem tradition, the great fish vomited forth the prophet Jonah; all of them probably the sites of ancient shrines of some Babylonian god.

To the west of Kufa is the dry bed of a great ancient canal, now called Cheri, or Sa'adeh, a continuation of the still used Henadieh. Local tradition says that a rich man of Bosrah loved a beautiful maiden, Sa'adeh, who lived on the Euphrates far to the north between Hit and Anah. But Sa'adeh loved the shady river banks, and would accept his wooing only on condition that he carried her to Bosrah by water under shade trees. So he built this canal, and planted trees along the bank. It is in reality the great canal which Nebuchadrezzar carried along the edge of the Arabian plateau from a point a little below Hit to the Persian Gulf, thus redeeming by irrigation a large tract of hitherto barren land.

The next day we started for Kerbela and the shrine of Husein. In addition to the usual khan fees, we were obliged to pay for the large water-jars in our part of the khan, for they had been polluted by our use, and must be broken. Here we parted with our guide, Abdan, who left us to return to the Affech. He had become singularly pious. On the march he used to eat with us and revile the Shiites for their exclusiveness, but, once arrived at Nejef, he, like the rest, treated us as unclean. The night before he left us we questioned him about the Affech and the Montefich. Twenty-one years before, in the time of Midhat Pasha, he said, a new mutessarif was sent to Hillah. He summoned Hajji Tarfa to meet him at Diwanieh. There he demanded of him the arrears of taxes of the Affech, and that they should promise to pay taxes in future. Hajji replied that it would be impossible to pay the arrears, because they really did not have the amount of money necessary to do so. The mutessarif was a hard drinker, and drunk at the time. He became abusive, and Tarfa remained silent. At last

the mutessarif struck him on the head with a staff he held in his hand, and told him he would come with soldiers and take all they possessed and carry off their young men to be soldiers in the Turkish army; for he had also demanded of Hajji that he enforce the conscription among the Affech; and this likewise Hajji had declared impossible. Hajji went home, and in a few days the mutessarif followed him with a battalion of soldiers. Hajji said nothing, but the tribes heard all, and the Affech and Daghara gathered armed, in great numbers, at Shatt-el-Hosein. Then they surrounded the mutessarif. First they killed the beasts of burden, then they fell on the soldiers, and massacred all who were not Arabs. These they let go free. Some one cut off the mutessarif's head and brought it to Hajji. When Midhat heard of this, he made war upon the Affech. He stopped the Daghara canal from flowing into their land. He engaged Nasr Pasha with a thousand Montefich horsemen to assist him. For three years the land of the Affech was ruined, and Hajji Tarfa and his followers were fugitives in the desert. Mohammed ibn Shkheir, a chief of the Behahtha, was appointed head chief in Hajji's stead. At last, after three years, by the intervention of Nasr, who was a friend of Hajji, he was restored to his land, and a fine of $10,000 laid upon him. On account of this money he was twice imprisoned in Baghdad, but he had paid the last instalment last year, and is now in high favor with the Government. Yet the Government has never succeeded in levying taxes on the Affech, or introducing the conscription.

Of the Montefich, Abdan said that the only true Montefich are the Sa'adun. These came from the neighborhood of Mecca about four hundred years ago. The Rufe'a, Ba'ij, Ahmed, Bene Hakhem, el-Bedur, Bene Rechab, etc., are separate tribes whom they subdued and ruled over. They reached their highest power under their great chief,

Nasr Pasha. He was made independent mutessarif of the Montefich, and received the encouragement and support of the Turkish Government in bringing all the independent tribes under his rule, incorporating them, in fact, with the Montefich, and setting his kinsmen and friends to be their sheikhs. But Nasr became too powerful, so he was enticed to Constantinople, and kept in honorary banishment there. At first one of his sons was appointed mutessarif in his stead, but after a time the Government sent a Turk to be mutessarif. The Montefich refused to acknowledge him, or to be ruled by any one but a Sa'adun of Nasr's family. The Turkish mutessarif had to take to flight. The Government attempted negotiations, but the Sa'adun remained firm. Then the Government attacked them and broke the power of the Montefich, and now all the subject tribes are free once more; nevertheless, they hold the Sa'adun in great honor. When Nasr heard of this war he died of a broken heart. Hamud-el-Bendir is a step-son of Nasr. His father formerly ruled the Bene Rechab. Abdan himself had been a confidential agent of Nasr Pasha's, and now held the same relation to Hajji Tarfa. He was by birth a Mohammerah Arab, and came from the neighborhood of Baghdad.

Shaoul left us at Nejef to go to Hillah and procure more money, for we had used up all he brought, and at Nejef there were no Jews and no bills of exchange. However, I found the Persian merchants anxious to sell us goods on credit, and left Nejef some fifteen pounds in debt. The door-socket we sent on by Shaoul, as we had failed to induce either the kaimakam of Samawa or the kaimakam of Nejef to take charge of it.

Three hours from Nejef we passed a large new khan in process of erection, as a charitable foundation for the entertainment of pilgrims. It was a bequest from a Persian, named Merza, lately deceased in Nejef. A little later we ran down a monitor lizard, or 'arwal, about three or

four feet long. In running, the creature straightened out its legs and galloped, standing as high from the ground as the goats of the country. When overtaken, it turned about and showed fight. I do not wonder that old travellers mistook the creatures for alligators, and told marvellous stories of deadly encounters with them, in which the poor lizards were naturally always defeated.

About noon we reached Khan Hamat, or Desert Khan, a singular cluster of five khans in one. Here were a number of Persian pilgrims, and a man from Nejef who gave us some particulars regarding the great wealth of the shrine of Ali. There are five treasuries, he said; one for jewels, one for money, one for rugs, one for arms, and one for spices. What is given to the shrine may never be sold or used for any outside purpose, and the accumulation of treasure is enormous.

Across the Hindieh marshes we could see the town of Kefil, where Jews and Moslems alike reverence the tomb of the prophet Ezekiel. This is generally supposed to be the actual place of his interment. Birs Nimrud was also visible, the most conspicuous and imposing of all the Babylonian monuments.

About sunset we started again and reached Kerbela two hours before dawn, after a beautiful moonlight ride. On the road we met a number of pilgrims, all, like ourselves, in donkey caravans, for no mules or horses were obtainable, all having been impressed by the Government for purposes which I did not ascertain. As we arrived, the call to prayer was sounding from the minarets, and Noorian hastened at once to the Mosque, Meshed Husein. He spent more time in this than in the Meshed Ali at Nejef, for Abbas, his conductor, who had unexpectedly become pious since our visit to Nejef, fell a praying tediously, and, in order not to betray himself, Noorian was obliged to imitate all his motions. Poor Abbas suffered for his ill-timed piety at a more convenient season.

Noorian reported Meshed Husein to be a mosque of enormous size, much larger than Meshed Ali. The wood-carving is abundant and fine, but the mosque is not so rich in gold, and the plating on the minarets only descends to the muezzin gallery. In the middle of the great court stands a third minaret of tiles, said to have been built by a freed slave, and hence called the Minaret of the Slave. There is another very curious shrine at Kerbela, that of Sheikh Abbas, some connection of Ali by marriage. He is a bad and very violent man, but forces people to worship him. He has been known to go into the market and take a gun and sword and hang them in his ziara. He beats and maltreats people if they do not reverence him and make him presents, and his *penchant* is arms of every description. His cult seems to be a species of devil worship.

Kerbela owes its existence to the fact that Husein, Ali's son, was slain here, by the soldiers of Muawia, the rival aspirant to the caliphate. His tomb is shown in the ziara, together with a second tomb, which, I was told, was that of Hassan, his brother, who was, however, really buried at, or near, Mecca. The city is situated on the edge of the alluvial soil, just touching the Arabian plateau, among plantations of palm-trees. It has a population of about sixty thousand, and seems to be a thriving and prosperous place, essentially Persian. The newer parts of the city, outside of the old walls, are built with broad streets and sidewalks, presenting an almost European appearance. The old walls are mostly broken down, although there are still gates at which the octroi duties are levied. No Jews or Christians are allowed to reside either there or at Nejef. Until some fifty years ago, both of these cities were practically self-governing hierarchies. At that time the Turkish Government undertook to deprive them of their liberties, and especially to enforce the military conscription. The Kerbelese resisted, and Ker-

bela was bombarded and taken, and a great many people lost their lives. Taking warning by the fate of Kerbela, Nejef opened its gates and submitted, hence the better preservation of the walls of Nejef. After this there were many tumults and outbreaks, so our informant said, but the Turks were "patient, and now one zaptieh governs both towns."

We encountered a spell of midsummer heat in Kerbela, the thermometer registering between one hundred and ten and one hundred and twenty degrees in the shade. By day my room in the khan was almost intolerable, but we could not leave the city until Shaoul's messenger should have brought us money from Hillah. At this season the whole of Irak is swept by high, hot winds from the northwest. Out of doors, provided the head is well protected against the sun, these assist one to bear the heat, but within doors they raise the heat to an almost insupportable degree, unless tempered by blowing through or over water. In well-equipped houses, therefore, the windows are kept blocked by mattresses of camel-thorn soaked with water. In Baghdad the well-to-do inhabitants pass the day in half-underground rooms, called serdab, and many make use of the punkah in addition. But while the heat by day is intense, the nights on the roof are not bad.

During the period of my stay the street in front of my window became a market-place. A "man with a hat" was sure to be a purchaser, and as the khanjees claim a percentage on all goods sold within a khan, the merchants brought their rugs and other goods, and spread them on the sidewalk in front of my windows, hoping thus to attract my attention and escape the fee. One of the peculiar industries of Kerbela is forged antiquities. But the thing which I most wanted I could buy neither here nor at Nejef, namely liquor. They told me that the right hand of him that sold it would be cut off.

Others said that that law no longer held, but that an immense fine would be imposed. The very vagueness of their information seemed to show that such a case had never occurred. Among the Turkish officials, however, there was rakee in abundance, the prejudices of the natives to the contrary, notwithstanding. The Turks, following the letter of the law, seem to regard distilled liquors as permitted, and only wine as prohibited. As for the prejudices of the Shiites, they enjoy offending them. The Shiites, in their turn, view the Turks with hatred and resentment, and would welcome any "infidel" power whatsoever which should oust the Turks and take possession of the country, believing that Europeans, in spite of their "infidelity," would govern more justly, and with more consideration for native prejudices than the Turks.

At Kerbela I saw for the first time some sheep from the Nejd, in Central Arabia. The hair was very long and silky, and in form the creatures resembled goats, but they had the meek and stupid sheep-face, and the enormous, broad, fat tails which mark the sheep of Asia. Later, at Baghdad, I met another inhabitant of the Nejd, an emir, the agent of Mohammed-er-Reshid, the great chief who is reported to have conquered and united the tribes and petty states of central Arabia, and established an independent and formidable kingdom there. The Persian pilgrims usually visit Imam Musa near Baghdad, then Kerbela, and lastly Nejef. Near the latter place, at Kasr Rehaba, on the edge of the desert, they are taken in charge by this emir, the representative of Mohammed-er-Reshid, who escorts them across the Nejd to Mecca, where they arrive in time to celebrate Kourban Beiram, the great feast of the Moslem year, and to offer the ram of substitution, as Abraham sacrificed the ram in place of his son Isaac. This is the Haj, or pilgrimage, and those who return alive bear thereafter the

title of hajji, pilgrim, while those who die go straight to heaven. I found the emir who had charge of this haj on behalf of Mohammed-er-Reshid to be quite an Arabian Cook. He was very anxious to have me join his personally-conducted tour across the Nejd, and held out every possible inducement. Certainly, it was a tempting chance, but, unfortunately, time was pressing. Moreover, he was suspiciously anxious to learn from the British Resident whether I was an emir, or nobleman, in my own country, and, failing that, whether I could write "little pieces of paper," which would be good for gold in Baghdad or Damascus. There seemed a possibility that I might be detained indefinitely in the Nejd, and kept employed in writing "little pieces of paper."

At last Hamza Ahmed, one of our old workmen, arrived from Hillah with money from Shaoul, and we were able to start. As the whole country was flooded, I once more allowed myself to be persuaded to go by boat, sending the horses to wade around and meet us at Jimjimeh, on the site of the ancient Babylon. A donkey ride of an hour and a half brought us to a miserable reed village on the shores of the Suleimanieh marshes. Noorian's fez and rifle, and a possibly somewhat too assertive manner, caused us to be suspected of an intention to impound boats for the Turkish Government, and the boats and their owners disappeared in the marshes. The people everywhere have the greatest apprehension of having their boats or their beasts impressed for Government service; for, although they are nominally paid for services thus rendered, they say that the money is always "eaten," and they receive nothing. But though the men had taken to flight, the women seemed agreeable and quite ready to enjoy a little chaff. Noorian told them that we wished to buy two pretty girls, and described the luxury in which they should live. From their actions I judged that they would not be unwilling

to consider the matter. They took great pains to show themselves off, and asked who was pretty, and what we would pay. At last, almost by main force, after a physical and linguistic tussle with a couple of women, Abbas succeeded in securing a very small boat. It took longer to find the poles and two men to handle them, and it was long past sunset before we started. There seemed to be but little depth of water, and we did a great deal of slow poling over mud and wading for the channel. Three hours and a half of this work brought us to a little village called Diwanieh, on the Hindieh canal, where with some difficulty we secured a larger boat, and were finally deposited at the place where the new dam was being constructed about three o'clock in the morning.

Since the time of Alexander the Great, if not before, the Hindieh canal has been a perpetual source of trouble to the rulers of the country. He either built or enlarged this canal, and brought it into connection with the canal of Nebuchadrezzar. The lay of the land, as already stated, is such that the Euphrates soon showed a tendency to abandon its proper course, and, descending by the Hindieh, to form great marshes to the west and south of Borsippa. Dam after dam has been erected, and broken. The last dam broke about ten years ago, and by the summer of 1889 the Euphrates had entirely abandoned its proper course. For months, at Hillah and below, the river bed was entirely dry. At Babylon, the ancient quay of Nebuchadrezzar was exposed in its full extent, and to get water to drink, people dug wells at the foot of it. On the other hand, the country to the west of the Euphrates suffered almost as seriously from excessive inundation, a great part of the region being converted into swamps. At the time of my visit the work of restoring the Euphrates to its proper bed had been going on under the direction of French engineers for two years. At a favorable point, where the Euphra-

tes and Hindieh are only one kilometre apart, a canal was dug connecting the two. A dam was then erected in the Hindieh for the purpose of forcing one half of the water back through this canal into the old bed. Contracts were made with the sheikhs of various villages to furnish bricks from the ruins of Babylon. Boats loaded with these bricks and with stones brought from Hit and other points higher up the Euphrates were sunk to form a foundation, and on this was erected a dam of brush, earth, and bricks. The work was finally completed after my departure from the country, and I am informed that one half of the water now descends by the old bed of the river.

That afternoon we dropped down what was left of the Euphrates to the village of Jimjimeh, on the site of Babylon. It was from this place that we had taken a large part of our skilled workmen during the two years of our excavations at Nippur. Digging for antiquities is almost a natural instinct with the men of Jimjimeh. They are like rats. They burrow the most amazing tunnels, and sink the narrowest, deepest wells through débris which you would suppose needed the support of beams and planks. The mounds of Babylon are in parts so riddled by their holes that one could imagine them to be a large rabbit warren. But they are enterprising, and do not confine themselves exclusively to Babylon. In connection with Baghdad and Hillah antiquity dealers, they also conduct surreptitious excavations in other places, sometimes several days' journey distant, and the antiquities from these excavations always find their way to London.

We received an ovation at Jimjimeh, almost the whole population meeting us by the water, and escorting us into their little village of mud-huts. Two feasts had been prepared in our honor by two of our old overseers, Obeid and Jasim. As we could not eat both, we chose the feast of the former, and ascended his house-top.

He had the previous year accompanied Field to Beirout and Constantinople, and brought back with him certain somewhat confused ideas of civilization. So now, along with the soap and water and towels for the pre-prandial ablution, he produced with great éclat, to the delight of his fellow-townsmen, proud of their association with such an event, a tooth-brush, a relic of my former comrade. It went to my heart to refuse him the honest satisfaction to his pride of seeing me use the instrument. I and my horses had long drunk out of the same pail, but this was too much. At a common tooth-brush I drew the line. Poor, pious soul, little did he know that it was made of the bristles of the accursed swine, and that he was polluted, and his very entrance into the paradise of pure Shiites endangered by its presence in his house. No good Moslem can use a tooth-brush, much less a Shiite Moslem.

That night, by lamplight on the roof, I paid my workmen the money I still owed for the two last weeks' work at Nippur. The men of Jimjimeh had agreed to work and be paid at some later date, and some of them had even come and offered me money. In a country where each man with right regards his neighbor as a potential thief, the trust which the men reposed in me was of the rarest, and I prized it, not only for itself, but as a sign that we had established a reputation which would be of great assistance to the work in future.

Venality, after sexual indulgence, is the greatest fault of the natives of Irak. Money can buy everything, and for that a man will sell even the honor of his women. All honor belongs to the rich, and no disgrace is greater than poverty. But, having obtained money, the Arab spends it on women. I remember a conversation in a guest-hut on the borders of the Daghara canal, into which we stumbled one night, having lost our way back to camp. The Arabs were anxious to know our quality and our in-

comes. The Turkish commissioner invented such facts as he thought best adapted to the situation, telling them, among other fictions, that Noorian had a salary of five liras a month. "How many wives has he?" "None." This seemed to them quite inconceivable, and called forth numerous inquiries and expressions of amazement. "Ah," sighed one at last, "if I had so much I would buy me five wives." Marriage with them is a mere purchase, and they speak of buying a woman, and haggle over her price as they do over any other article of merchandise. Abbas told me that his wife cost him fifteen liras (sixty-six dollars), and the wedding feast sixteen. He was not satisfied with her, and wished to buy another who would cost him ten liras, which sum he hoped to obtain from me. In fact, fifteen liras is a very high price for a man in his station to pay, and ten ought to buy a very good article. Tahir, Abbas's younger brother, proposed, instead of paying money for a wife, to trade off Sultana, his sister, our camp beauty. Such are their ideas of marriage. Their conversation, their songs, and their games are simply filthy.

We had proposed to start early the next morning for Baghdad, but poor Jasim and his good old wife, our faithful washwoman and general factotum at Nippur, felt so badly over their rejected feast, the old woman shedding tears, that, to the imminent peril of our digestive apparatus, we had to stay and eat it the next morning. It was hard to say good-by to the workmen, who had been almost like our children for two years, for, with all his faults, the Arab is peculiarly lovable. He is dishonest, and as unstable and unreliable as a little child, but he is, after all, nothing but a child, and in that lies his charm. The whole community escorted us some distance beyond the gate of the town, out into the ruins of Babylon, coming back time and again to kiss our hands and say good-by once more.

It was half-past one when we reached Khan Mahawil. The heat was intense, and men and animals were suffering so severely from the sun that I was forced to call a halt until evening. About seven we resumed our journey. Between Mahawil and Baghdad there is at the present day but one village, Mahmudieh, and that is really nothing but a collection of khans and coffee-houses. But in olden times this was probably the most populous and highly cultivated portion of the whole country, and even of the world. It is traversed by a perfect network of lines of mounds, the remains of ancient ship canals, while for miles at a time the ground is literally covered with fragments of pottery and heaps of slag. It is the region which was called in Babylonian and Assyrian antiquity Gan Eden, Garden of Eden, or Garden of Pleasure, and which doubtless furnished the local coloring for the beautiful Hebrew picture of the primeval earthly paradise. As late as the time of Herodotus it raised three crops of wheat yearly. Now it is an utter desert, excepting for the khans at which the Persian pilgrims rest with their dead on their way to seek admission to their heavenly paradise.

But it was not my desire in that intense heat to linger in the deserted Garden of Eden, which I had already traversed several times. I had decided to press through to Baghdad in one night, and so Noorian and I rode ahead without guides, leaving the caravan to follow us more slowly. It was four A.M. when we reached Mahmudieh, where we drank tea and coffee, and slept an hour or two on benches by the side of the road.

About the middle of the morning we caught sight of 'Akerkuf, towering above the plains, then of the golden minarets of Imam Musa, and finally the welcome green of the palm groves of Baghdad along the banks of the Tigris could be distinguished. By the advice of some Zobeid Arabs we took a short cut, crossing the Tigris in

kufas some distance below the city, and rode up on the east side, only to find that Haynes had rented the house of an Indian Nawab on the west, or native side of the river.

These kufas are the characteristic boats of the region, and have been in use from the earliest times, as we see from the representations on the ancient monuments. They are nothing but round baskets of brush, smeared with bitumen, and may be of any size. Ours was big enough to hold twelve men and several horses. It was a foretaste of home to find ourselves in the familiar, clumsy things once more. And Baghdad, the city of Harun-er-Rashid, really appeared to us like home itself as we entered the American Consulate on the 7th of June, 1890, after an absence of six months.

CHAPTER XIII.

CONCLUSION.

Leave Baghdad—Plans for Future Work—A Persecution of Christians—Blackmail—A Locust Plague—A Comical Error—Alliance Israelite—Bad Water—Hidden Antiquities—Danger Ahead—Pretended Brigands—A Treacherous Zaptieh—The Beirout Custom-house—Sidon—Monks of Bethlehem—The Philistine Plain—Ancient Gaza—Jerash—Roman Inscriptions—A Druse War—Turkish Barracks—Corrupt Officials—Russian Methods—Antiquities Delayed—Psychological Phenomenon—Brigands and Conspiracies—Abrizan—The Sultan's Gift—Another Expedition.

IT was the 7th of June when I reached Baghdad. Dr. Selim Aftimus had left three weeks before for Beirout, cured of his fever. I found that the antiquities had not been shipped for Constantinople, and apparently no steps had been taken looking to that end. This was aggravating, as I had written and telegraphed to Constantinople to have them expedited, hoping that they might reach there about the same time that I did, and that the division of "finds" might be completed before my return to America. A new Governor-General, Sirri Pasha, now filled the place of Mustafa Assim. He was an active, energetic man, but reported to be unusually corrupt. I sent word that I should like to pay my respects to him, but received the reply that he would come and call on me, which he did the same day,—an unusual mark of honor. Nevertheless, I could not succeed in having the antiquities expedited, nor was I even allowed to see the

outside of the boxes in which they were packed, so jealous were the authorities.

When the Committee sent me out the second year, it was at first proposed to lay on me the condition that I should re-engage no one who had accompanied me the first year. At my earnest request this condition was not insisted upon, and I was left free to do as I thought best; but a written paper was put in my hands recommending me not to re-engage any one. This recommendation I had disregarded after careful consideration, and re-engaged both Haynes and Noorian. The result seemed to me to have justified my conduct so completely that, before leaving Nippur at the end of my second campaign, anxious to see the continuance of our excavations assured, and feeling that I could not myself, in justice to my other obligations, continue in the field for a third year, I wrote to the Committee urging the appointment of Haynes as my successor and the prosecution of the excavations under him in the autumn. In Baghdad I received a dispatch to the effect that the continuance, or discontinuance, of the Expedition would depend on the result of the division of the "finds." That is, if I could bring back to Philadelphia a sufficient representation of antiquities, money to continue the excavations would be forthcoming, otherwise not. I had, therefore, a double reason for wishing to expedite the transport of the antiquities. It was evident, however, that nothing was to be accomplished by staying in Baghdad, and so I prepared to start for the coast forthwith, leaving the Expedition property and equipments stored with Haynes.

For cheapness and speed I engaged my passage by a steamer from Bosrah for Suez, touching at Aden, but at the last moment this vessel was chartered for pilgrim transport, and I finally had to decide to return by the old route up the Euphrates. Accordingly mules were engaged, and on the evening of the 16th I set out from

Baghdad, accompanied by our two faithful Armenian servants, Hajji Kework and Artin.

Noorian's contract was now ended, and he left me at Baghdad to visit his home at Sert, in Armenia. Later he returned to this country, to put the experience acquired in two expeditions to practical use, as a dealer in antiquities. Haynes arranged to remain at his own risk in his position as consul until the Committee at home should decide whether or not it would conduct further excavations at Nippur. As the result of my experience, I believed that excavations could be conducted continuously the whole year through. In consequence of the reports of former explorers, we had, in the first two years, excavated only during the winter months, but I found that I was able to travel by day in those regions in June, and that Europeans lived and worked in Baghdad, Bosrah, and elsewhere through the whole summer. I could see no reason why we should not in the same way live and conduct excavations at Nufar. To live under high pressure, as I had been doing during the four months of the excavations in the second year, would soon exhaust any man; but to excavate with a small force of fifty, or thereabouts, concentrating them in one spot, seemed quite feasible. To my great satisfaction, I found that Haynes agreed with me in this matter, and was prepared, if the Committee wished it, to conduct excavations for eighteen months consecutively, winter and summer together. I now proposed, therefore, to the Committee that he should remain in Baghdad as consul until after the division of "finds," and that if our part of these was satisfactory he should then resign his consulship and conduct excavations at Nippur for eighteen months, with a force of about fifty Arabs.

While at Nippur I had heard reports of conversions of Moslems in Baghdad through the work of the English Church Mission, and of a consequent persecution of Chris-

tians. In Baghdad I learned somewhat more of the facts in the case. One Moslem, a mullah, had been baptized. He was arrested by the Turkish authorities, and would have been put to death, presumably, had he not claimed Persian nationality. He was finally turned over to the Persian authorities, and what became of him I do not know. The English medical dispensary was forcibly closed, and guards stationed at the door. Many of the Moslems who had been visiting this dispensary, and all those who were reported as having attended the preaching services, were arrested and thrown into prison; some fifty in all. The native preacher, through whose agency the mullah had been converted, was banished. The English Government made no protest, and took no action in the matter, although shortly before, when the Jews were reported to have been persecuted by Mustafa Assim Pasha, it had interfered energetically. Nothing most remotely approaching the propagation of the Gospel among Moslems is tolerated in Turkey, and a Moslem changes his religion at the peril of his life. Some years before, when this mission station was in the hands of the Society for the Conversion of the Jews, a mullah was converted at Baghdad under most romantic circumstances. He may be said to have converted himself by the reading of the New Testament, since the missionary then stationed there carefully refrained from preaching to the Moslems. One night he came to this missionary and told him that he had long been a Christian at heart, and that he was leaving Baghdad that night to go to some country where he might be baptized and openly profess Christianity. He left, but his intention was in some way discovered, and he was murdered on the road not far from Baghdad.

My trip up the Euphrates was neither fruitful in incidents nor valuable from the standpoint of exploration. I travelled by night and rested by day. Having learned ex-

perience from our uncomfortable trip down the Euphrates the first year, I carried two small tents with me, one for myself and one for the men, and did not trust to the hospitality of the zaptieh barracks. My tent was old and rickety, however, and was wrecked on the road two or three times, so that against my will I was compelled sometimes to resort to those flea-infested haunts. At Fehemi I was obliged to take refuge in the barracks for another reason: immense numbers of Anazeh were encamped all about, and the corporal in charge would not guarantee my safety outside of the walls. Indeed, I was compelled to pay a small backsheesh to the Anazeh chief to obtain a safe passage through their hordes from Fehemi to Anah.

There was a locust plague that summer, and every green thing except the palms had been eaten up by the all-devouring insects, and in some places even the palm leaves had been nibbled and gnawed. Millions of locusts had fallen into the Euphrates and perished there, and at many points the great river stank like a cess-pool. As I ate my dinner, the locusts would often descend upon it in such quantities that I could scarcely see the food. To secure a mouthful of the bread I held in my hands I was compelled to brush a free place, and before I was ready for another mouthful the bread was once more buried under the bodies of locusts.

At Deir I called upon my old friend the Governor, and was the fortunate means of securing for the English permission to excavate at the mound of Deir near Abu Habba, north of Babylon; or rather, of preventing their request for that permission from being refused. In compliance with the law of excavations requiring the submission of a topographical plan to the local authorities, they had submitted, with their request for permission to excavate at Deir, a supposed map of the place. This the authorities at Constantinople had referred, not to the Wali

Pasha of Baghdad, but to the Mutessarif of Deir on the Euphrates. The engineer of the Sanjak, an unusually intelligent young fellow from Baghdad, insisted that it was not a map of that place; but the mutessarif, who did not so much as know the meaning of a map, declared that he was ignorant and unfit for the post of engineer, and should be dismissed unless he could explain the map properly. The map was submitted to me. It was an entirely imaginary composition, representing nothing in heaven or earth, being intended merely to comply with the technicality of the law of antiquities, which requires that a topographical plan shall be submitted before permission to excavate can be granted. By good fortune, the name "Yuseffieh Canal" appeared on this precious document, which suggested to me that the ruin-mound of Deir near Abu Habba was intended, since there is a canal of that name there. The mutessarif accepted my explanation, the engineer retained his office, and the English received permission to dig at Deir in Babylonia, which they did the following winter. If all reports may be believed, they found the place already thoroughly looted by Arabs digging for one of Daoud Thoma's brothers, and the excavations were not a success.

I was compelled to delay one day at Deir to obtain camels to carry water over the desert route to Kabakib. This gave me the opportunity of meeting an Armenian who had studied in the Medical Department of the University of Pennsylvania. He had established a medical practice at Deir on the Euphrates, and was a most enthusiastic and loyal son of the University. The Vicar Apostolic of the Armenian Catholics of the place also called on me at the khan to ask my aid in establishing a school. It was a most laudable enterprise, toward which I gladly contributed what I could. It is a pity that some organization has not done for the Christians what the Alliance Israelite is doing for the Jews. At Baghdad

there is an admirable Jewish school supported by the Alliance, to which the Jews from all that region resort, but there are no Christian and no Moslem schools worthy of the name. The consequence is that the Jews far outstrip the other native elements of the population in intelligence and enterprise, and exercise an influence out of all proportion to their numbers.

The trip from Deir to Kurietain proved to be a very trying one. At Kabakib we found the water in the well almost exhausted, and what was left full of dead locusts. My tent broke down at this point, and I was obliged to take refuge in the barracks. Here I tried to sleep in the only habitable room, while a party of rough zaptiehs talked, quarrelled, and told stories, fleas and flies bit me, and hundreds of locusts crawled over us all. We left here before sundown and rode sixteen hours to Sukhne. My wild beast of a missionary horse was altogether beside himself, because the zaptieh rode a mare, and did nothing but plunge, bolt, kick, and rear the entire sixteen hours, so that sleep on his back was impossible, and I could not even rest myself by alighting at intervals and walking. Half way we consumed the last drop of water which the camels had brought from Deir, and they turned back. At Sukhne we found the one water pool, which constitutes the water supply of the place, almost absolutely undrinkable. The water is, in any case, strongly impregnated with sulphur. The little town stands just above the pool and drains into it. For months great companies of bedouin had been encamped in the neighborhood, driving their sheep, asses, horses, camels, and women into this pool to get water day after day. Add to all this that hundreds of thousands of locusts had fallen into it and been drowned, and that their decomposing bodies were left in the pool, and you may form some idea of what we had to drink at Sukhne. Along the Euphrates there had been times when tea was not strong

enough to drown the taste of the locusts in the water, but the coffee had always been drinkable. Here it only seemed to add one bad taste more to the loathsome medley already existing.

The Kaimakam of Tadmor was at Sukhne on a tax-collecting trip, and he and his men occupied all the available space in the barracks. As already related, my tent had been wrecked at Kabakib, and the men and I had but the little cook tent between us. There was not a breath of air, and the thermometer went up to 110° and over in the shade. There was not a tree nor any shelter, and the glaring white rocks and staring sand made the heat doubly intolerable. What with the water and the heat, and a bottle of beer that I had brought from Deir, when the time arrived for our departure I was so sick that I could not mount my horse. I told my men to strike the tent, however, saddle the animals, and prepare to start, and to wake me at the end of exactly two hours. Then I took as large a dose of brandy as I could swallow, lay down on the ground and fell asleep. The brandy and the cooler air of the evening revived me, and at the end of two hours I was able to mount and ride on with the Kaimakam of Tadmor to Rakka. Here we found better conditions, and when we reached Tadmor the next day I was quite myself again, and able to go about through the town to explore the ruins and hunt for antiquities. I lunched with Sheikh Faris, who had a fine bed from Paris, and some guns which Mr. Wilfred Blunt and other friends had given him. The Parisian bed looked singularly out of place in the Arab house. Later, Faris sent to my tent a beautiful Palmyrene bas relief. The inhabitants, concluding from my arrival with the kaimakam that I was a friend of his and would not be interfered with, also brought to my tent a considerable number of bas reliefs, some of which were unusually good. As I walked through the streets of the town

within the limits of the old temple, I was invited into a house. The door was then closed, and excavations commenced in the middle of the floor. Here, as it proved, the owners had secreted some very good Palmyrene pieces. In another house, into which I was similarly invited, the busts were hidden in an oven built into the wall. Others had buried them in the gardens about the city. As dusk fell, and I prepared to depart men appeared from all sides bringing more busts and bas reliefs, dug out from various hiding-places, until at last two or three large camel loads were lying in and about my tent. With some difficulty I secured camels and packed the objects in great sacks on their backs.

The following morning our resting-place was Ain-el-Bweida. Here, as at Kabakib, the ancient Palmyrene well had run low and was full of dead locusts. The water was stinking black mud, the smell of which was so nauseating that I had to hold my nose to get it into my mouth. My men had more self-control than I, and contrived to exist without drinking, but my thirst was so raging that I felt an absolute necessity of pouring something liquid down my throat, even if it were the vilest black mud.

That night we attempted to push through to Kurietain. We halted for a few minutes' rest at Kasr-el-Hair, intending merely to dismount and feed our animals and ourselves, but every one fell sound asleep, and I, waking after a couple of hours, found the entire party wrapped in the deepest slumber, while horses, mules, and camels strayed about at will. It was mid-morning when, entirely exhausted and worn out with thirst, heat, and the long journey, we arrived at Kurietain. Here I became the guest of the native Protestant missionary, whose existence I had not ascertained on my former visit. Word reached us, through parties coming from Damascus, that the authorities were searching all caravans from Palmyra

for contraband antiquities, and that there was no chance of our entering the city with the goods in our possession. The camel drivers were alarmed lest they should be arrested and cast into prison, and refused to go on by the Damascus route. A zaptieh offered to guide us across the anti-Lebanon into the Bek'a and so down to Baalbek, and I decided to accept his offer. The next day we stopped at a miserable little village on the road from Deir to Homs. This road was a curiosity. Sections of a few hundred yards or so had been built, leaving intervening sections of the same size untouched. So long had the work been under way that the completed sections had in the meantime fallen into decay. We were the guests of a Christian family, who entertained us most hospitably.

The next night, going through the mountains of the anti-Lebanon, the zaptieh got up a pretended attack by brigands. He had been telling gruesome tales of robberies and murders on the route to prepare the way for this coup. His object was to obtain a larger backsheesh at the end as payment for his heroism in rescuing us from robbers, but I was not taken in. After sunrise we descended into a little valley opening into the Bek'a. Here men were working in the fields, reaping the grain. As they saw us, they dropped their work and grasping handfuls of the heads of wheat ran toward us screaming and gesticulating wildly. It is the custom of the country. They offer the traveller who comes through their fields the sweet new grain to eat, and demand of him a backsheesh in return.

We spent the day at Ras-el-Baalbek as guests of the native Protestant missionary, and that night we travelled down the Bek'a to Baalbek. Although it was mid-July the air was bitter cold, sweeping down from the snow-fields on top of the Lebanon, and all of us were so benumbed that we could not sit our beasts, but were com-

pelled to dismount and jump and beat our hands across our breasts to keep the blood in circulation. But long before we reached Baalbek the sun had risen, and it had become as intensely hot as during the night it had been cold. I left the caravan behind me, and with the zaptieh pressed on to the town, where I took a room in the hotel. The caravan, arriving a couple of hours later, camped in the gardens south of the great Temple of the Sun. I was so tired when I reached the hotel that I fell asleep on a chair in my room waiting for breakfast to be served. I waked up to find that my rascally zaptieh had taken my pipe and tobacco out of my belt-pouch, and was about to enjoy a smoke from my pipe. Indignant at the fellow's extreme impertinence, I snatched the pipe from his hands and literally kicked him out of the room, whereupon he went to the kaimakam, and informed him that our luggage consisted of a large quantity of contraband antiquities from Palmyra. By good fortune, a dragoman who was present heard the zaptieh's report, and told the kaimakam that he lied; that he himself knew us well, had seen all of our luggage unpacked with his own eyes, and that there was nothing but kitchen utensils and clothes, and such things as all travellers have. He came to see me, this dragoman, and I engaged him to take me over the ruins. May he be forgiven for his kind-hearted fib!

Leaving the caravan in charge of Hajji Kework to come on at its leisure, I left Baalbek in a wagon the next morning and struck the coach road from Damascus to Beirout at Shtora, boarded the diligence there, and reached Beirout that evening, July 10th, rejoining my wife and family. Here I was somewhat perplexed to know what to do with the antiquities which I had so rashly purchased at Palmyra. I could not send them to Constantinople. They would simply have been seized by the customs authorities at Beirout, and either deposited in the garden of the Serai there until they were

destroyed, or sold to some antiquity dealer. On the other hand, the customs authorities were willing, in consideration of a very moderate backsheesh, to pass them out of the country. They even insured them against seizure by themselves, depositing caution money as a guarantee of their good faith.

That was a very interesting custom-house. As there was nothing contraband, to the best of my knowledge, in my personal and household goods, I let them go through the custom-house and pay the regular export duties. This caused me endless annoyance and much loss. Among other things, one of the inspectors took a fancy to a curious ladies' prayer-rug which I had brought from Baghdad, and seized it on the ground that it was embroidered with a verse from the Koran, and might not, therefore, be exported to an "infidel" country. I would have paid him a reasonable backsheesh to pass the thing, but this proceeding irritated me, and I determined that that official should never own the rug, whatever else might become of it. Hajji Kework, seeing how matters stood, stole the rug without my knowledge, when the officials' backs were turned. But this only irritated the inspector and destroyed my last chance of an amicable settlement. It might also have caused the too-faithful Hajji a term of imprisonment, but he searched diligently, and lo, there the rug had been lying all the time where both he and the officials had failed to observe it! Then the German Consul-General took up the matter (our own consul was absent on a sick leave). He had long wanted a test case, but had not been able to make one, because merchants dread such conflicts with the authorities. It means continual petty annoyances in their business, involving ultimately much loss. As I was leaving Beirout, I had nothing to lose, and was quite ready to make the fight. All summer long, while I was in Palestine, they fought over that absurd rug, which cost me originally, if

I remember aright, about $1.50. The case was appealed to Constantinople, and was finally decided against us. I was informed that I could not export to an "infidel" country any sacred writing, if it were even so little as three words from the Koran embroidered on a prayer-rug; but, on the other hand, the rug was mine, if I would give guarantees that it should remain in the country. Thereupon, I formally presented it to Munif Pasha, the Minister of Public Instruction, and had it forwarded to him at the expense of the Turkish Government. I thought that he would appreciate the joke; but found on my return to Constantinople that, while he was pleased at my consideration in sending him a present, he could not understand why such a cheap thing had been sent to him with so much pomp and circumstance.

In Beirout I learned that our antiquities had not yet reached Constantinople, nor even left Baghdad. I wrote and telegraphed both to Baghdad and Constantinople, but without result. The fact was that the money to move them was not forthcoming. I offered to pay for their transport, but the Museum would not permit me to do so, on principle. It meant to assert itself against the Wali of Baghdad, if it took all summer, which it did, and much more beside. It was necessary for me to wait somewhere until the antiquities should arrive, and I resolved to spend the time in a trip through Palestine, the money for which had been most generously presented to me by friends of the Divinity School in Philadelphia. My wife and children sailed for Switzerland on the 23d of July, and I left Beirout a couple of days later, accompanied by Hajji Kework and Artin, who begged me as a reward for their faithfulness to take them with me to Jerusalem.

No part of all my stay in the East was more full of interest and instruction to me personally than my trip through Palestine; but I shall not ask the reader to follow

me in detail through a region so well and so often described. Only a few of my experiences and observations were of general interest. At Sidon I naturally visited the spot where the famous sarcophagi were found, and was interested to hear that when the sarcophagus of Tabnit, the Phœnician king, was opened, it was found to be filled with a liquid, in which lay the body as fresh as though buried the day before. Only the nose, which projected above the liquid, was black and withered. Unfortunately, the workmen, supposing the liquid to be water which had leaked in, poured it off before they could be stopped, and the body quickly became corrupt.

A somewhat gay young Lothario, whom I had met the year before on a Mediterranean steamer, kindly guided me about and showed me everything, including some forged Phœnician inscriptions, which seem to be manufactured there to satisfy the tourist demand. The amount of glass objects found in graves here and along the shore southward to Tyre is astonishing, and, next to fruit, ancient Phœnician glass is probably the most valuable commodity exported from Sidon to-day. Waxing confidential, my host told me of some of his experiences and escapades, including one in which a young Moslem girl was drowned by her family in the fountain in the courtyard. I disbelieved this story at first, but found later that it is a custom of the country for the men of the family to drown in a well or fountain the maiden who has brought shame on their house; but the man, unless taken in the act, goes free.

On Mount Tabor I was joined by Mr. Dean Walker, then a tutor in the Protestant Syrian College at Beirout. At Bethlehem we had a comical experience. Arriving there about dark, ill, and unable to walk much, I told our men to pitch the tents in the town. They selected a likely looking square; and we, leaving them to get dinner, went out to explore. Returning between eight

and nine, we were met by some zaptiehs who informed me that the Governor wished to do himself the honor of making our acquaintance. I told them that I was ill, and really could not, much as I should like to do so, call upon the Governor just then, as I had not yet had my supper. But they said the Governor was very urgent to see us, and we were obliged to go. He was courteous and apologetic, but we had pitched our tent directly in front of the door of the Church of the Nativity, and the Latin, Greek, and Armenian monks had sent him word that if he did not have us removed at once they would telegraph a complaint against him to Constantinople. They were very unreasonable people, those monks, he said, and when they were not quarrelling with one another they were always finding fault with him, until his life was made a burden. He begged us, therefore, to comply with his request to move our tents, and the captain of the zaptiehs offered us the hospitality of his house and his table during our stay in Bethlehem. Surely never were offenders more kindly dealt with. I sent for one of the monks, made my apologies for the mistake of our men in unwittingly pitching the tent before the church door and asked permission, in view of the lateness of the hour, to remain where we were for the night, promising to move before early mass the following morning. My proposition was accepted; the monk abused the kaimakam, the kaimakam showed his opinion of the monk by actions more eloquent than words, and the incident was closed.

From Hebron we journeyed to Gaza by way of ancient Eleutheropolis in the Shephelah, all about which are the most interesting troglodytic dwellings. Here we were joined by a delightful young American friend of Walker's. He had reached Jerusalem that morning, and, learning at the consulate that we had left the day before for Bethlehem and Hebron, hired two horses to take him and his

luggage to the latter place, and started in pursuit. Finding a good road, he galloped on, leaving the man and the baggage horse to follow more slowly. Learning at Hebron that we had started for Gaza an hour or two before, he followed us, leaving his baggage to shift for itself, and the owner of the horses to put such construction on his actions as he pleased. He ultimately recovered his baggage at Jerusalem, and settled with the aggrieved owner of the horses by purchasing the steed he had so unceremoniously appropriated.

At Hebron we had heard that the Philistine plain was unsafe, owing to bedouin raids. At a village on the plain we had such alarming news of the unsettled condition of the region that my muleteer endeavored to throw my baggage on the ground and flee with his animals. I was forced to give him a thrashing, after which we proceeded to Gaza in safety; and from that time onward our muleteers were ready to follow us whithersoever we would.

At Gaza we were the guests of a medical missionary of the English Church Mission Society. Under his escort we visited Petrie's excavations at Tel Hesy. It was long after dark when we reached home, and the servants of the mission were weeping and wailing, supposing that we had been gobbled up by the bedouin. In such mortal terror do the town dwellers stand before the children of the desert!

I had the good fortune to discover at the base of a mound, supposed to be a natural hill, near a mosque in the outskirts of Gaza, an ancient wall of unbaked brick. The entire mound proved to be composed of débris. This seemed to show that the modern town of Gaza occupies the site of the ancient city. I have no doubt that excavations in this mound would result in interesting discoveries. But of all the sites which I saw in western Palestine, the one which seemed to me the easiest to be

explored and the most promising of results to the explorer, was the site of the city of Samaria.

On our return to Jerusalem we found the Greek and Latin monks engaged in a pitched battle over some sacred place at the foot of the Mount of Olives. Finally the Turkish soldiers interfered on the Greek side and rolled the Latin monks down the hill; after which there was temporary peace. From Jerusalem we crossed the Jordan, and went as far southward as Madeba, which was then occupied by a colony of Christian Arabs from Kerak, who were building themselves houses out of the ruins of the ancient town. That which they had unearthed was from the late Byzantine period, immediately preceding the Arab conquest. There were a few inscriptions, some remains of churches, and a bath in a private house with the mosaic floor intact. Here we were the guests of a Roman Catholic missionary, M. Biver, who was doing a most admirable work. The state of the country was such that we were unable to visit Kerak; so, after looking at Ma'in and other sites around Madeba, we journeyed eastward to Mesheytta, beyond the pilgrim road in the desert. This remarkable ruin, a palace in the desert, was begun and never completed. On the outside of the walls there is some most interesting stone carving done by different artists. The building is commonly described as a palace of Chosroes, but I was inclined to think that it must be even later, and that it might belong to the period when the Egyptian Sultans ruled Syria, and the road eastward of the Jordan, from Kerak to Damascus, was frequented and well fortified.

Between Madeba and Mesheytta lie some remains of the crusading period. Going northward from Mesheytta we visited the extremely interesting ruins of Haraibet-es-Sukh, or, "Ruins of the Market Place." These, and all the ruins from that point northward belong to an earlier period than the ruins on the surface in Moab; namely, to

the first two post-Christian centuries. At Madeba I learned that, in addition to the Greek inscriptions which I saw there had been discovered and carried away a Nabatæan inscription of a King Aretas. At Amman, as I was leaving the town, I saw a similar Nabatæan inscription which had just been discovered. It was on a very long and very heavy block of stone. Both at Amman and Jerash (the ancient Gerasa) I was grieved to see the way in which the thrifty Circassian colonists, who had been planted in those places, were destroying the wonderful ancient ruins to make themselves homes. They were a courageous and hardy set of men, and although few in number had so handled the Arabs in the neighborhood that none ventured to molest or interfere with them. They were independent in their bearing, industrious, and minded their own business, leaving us to attend to ours, so that at both of those towns I could almost fancy that I had dropped into a European village. Nevertheless, they were working sinful havoc with the priceless antiquities.

At Jerash I had the good fortune to discover some few new inscriptions, and a days' journey northward of that place, near an unknown town, I discovered and copied an unimportant inscription of Septimius Severus. We went from Jerash to Rimteh, and from there to Der'at, or Edrei, the ancient city of Og. Here I endeavored to find someone who could show me the underground city described by Wetzstein, but, either from their own native surliness, or because Circassians had guided us to the place, the natives refused to show us the entrance, or even to receive us in the town; and, when I attempted to make a search on my own account, they became so unfriendly and menacing, that we were obliged to leave without seeing those famous underground streets and houses.

From here we went to Bosrah, where the officers in command told me that they had some good whiskey, and

invited me to come and carouse with them. They caroused so hard and so long that the next morning I was unable to bid them good-by before my departure. There was war between the Druses and the Turks at that time, and no travellers were permitted to enter the Hauran; but we, having come by the back way, as it were, without official escort, and without announcing our intention beforehand, entered the country without difficulty. The Druses regarded us as friends, because we were to them Englishmen, and the Turks could not treat us otherwise, so that all places were open; but, unfortunately, my faithful Hajji Kework was taken seriously ill, and to save his life I was obliged to go to the Turkish military camp at Suweida, and apply to the commanding officer for medical attendance by his physician. There had been a battle fought at this point, and the result of the war was a draw. The Turks held the ground that they had held before, and the Druses that which they had held; but the official reports declared that the Turks had beaten the Druses and quieted the country. These wars are of continual recurrence. They are the result partly of Turkish misgovernment, and partly of the Druse and Arab hatred of the Turks, and desire for independence. The Turks believe that they are due to English intrigues, and the English certainly do maintain most suspiciously friendly relations both with the Druses of the Hauran and also with the Arabs of the Nejd. Although the Turks do not seem to conduct their military operations with much skill, and their wars usually result in an apparent draw, nevertheless they have been, and still are, slowly pressing southward on the eastern side of the Jordan, establishing military stations, extending the telegraph, and bringing the country into actual, and not merely nominal, subjection to the Porte. Since my visit they have carried their arms southward as far as Kerak, whereas at that time, 1890, the whole country was virtually independent, and

no one could journey through it without making arrangements with the sheikhs living there.

As it proved necessary to carry Hajji Kework to Damascus or Beirout, where he could have proper treatment and the rest requisite to his cure, I consented to go out in the quickest way possible, and the Turkish commandant sent us by the military road under escort of a guard of soldiers. At the first barracks at which we stopped, they had the usual carouse after dinner. The major in command and the telegraph operator fell into a lively argument about America. The former finally informed me that there were two Americas, a new and an old, one discovered four hundred years ago, and one discovered about ten years since. Between these two is a strait of water, and under this they are digging a tunnel. It was for that that so many Syrians were going out of the country, in order to work at this tunnel. In such guise had the fame of the Isthmus of Panama and the proposed canal penetrated the Turkish provinces. I slept in the commandant's room that night, and the first thing in the morning he insisted on preparing two strong glasses of bitters, one for him and one for me, as a preventive against the fever.

We skirted the edge of the Lejja that day, and I fell ill of the fever, in spite of the bitters, and was obliged to stop at some Turkish barracks while the caravan went on. The next day I overtook them, but the day following that I was down with the fever again, and reached Damascus with great difficulty. From there I went to Beirout by the diligence. The cholera had broken out once more and was spreading rapidly in our direction, and I found that it was necessary to move with haste, or I should be quarantined on the way to Constantinople. Indeed, our ship was the last from that region to pass the Dardanelles without quarantine. It was a Russian steamer, and Russian influence is all powerful in Turkey. Moreover,

as the captain told us later, when the quarantine doctor came on board he gave him two gold pieces; whereupon he signed a clean paper, and we went forward without question.

Among our passengers was an educated Turk, a devout Mussulman and a mullah, but not intolerant; one of the best informed, most upright and straightforward men I met in the Empire. After we had become acquainted he told me his story. He was an inspector of schools in the Department of Public Instruction, and had been sent to Damascus to examine and report on the schools in that province. On investigation, he discovered that over $40,000 had been embezzled by the provincial superintendent of schools and the Wali. They offered him $1000 first, and afterwards more, if he would make a report satisfactory to them. He refused, and demanded the return of the money. Suddenly he was arrested, accused of *lèse majesté*, tried, convicted, and sentenced to imprisonment. In prison he almost lost his life, and believed that an attempt was made to poison him. Finally he was released, and was now on his way to Constantinople, preceded by the report that he had been guilty of *lèse majesté*. The crime most feared at the Palace is conspiracy or treason, and there is no surer way of winning the favor of the Sultan than to bring proofs, real or plausible, of the disloyalty of some official, and no greater danger can befall any subject of the Empire than to be accused of treasonable utterances. I met this poor fellow afterwards in exile, and again, still later, living in Constantinople under police surveillance, in dread of his life. The school official whom he had accused of embezzlement bought himself a good office in Constantinople, and the last I heard of him, he was "flourishing like a green bay-tree."

At Smyrna I visited a Greek school which contained a museum of antiquities. This school was under English

protection, having been built at a time when English influence was dominant in the Orient. Now English protection is almost worthless, and the authorities lamented that they were not under Russian protection, which is worth having. The reason why Russian protection is valuable was shown by an incident which occurred in Constantinople shortly afterwards. The Armenian messengers of the various consulates went down to the post-office in Galata one morning to get the mail. They did not return, but in course of time police officers brought their respective mail-bags to the different consulates, with the information that their Armenian messengers had been arrested for seditious gathering on the street. The Russian Consul seized the officer who brought him the news, put him in ward, and sent word to the authorities that he should hold him as a hostage and retaliate on him anything done to his messenger. The Armenian was promptly sent back, and, after questioning him and satisfying himself that he had been arrested without cause, the Consul ordered him to kick and cuff the policeman, and to treat him precisely as he had himself been treated; after which he let the policeman go.

In the house of a Greek merchant in Smyrna I saw a beautiful collection of terra-cotta figurines. Like most men of his race, this merchant was intensely patriotic. He had purchased these terra-cottas with a view of enriching the Museum at Athens, and later I saw there a fine collection presented by him. In Constantinople a collection of Rhodian pottery, Trojan glass, and coins of all ages was offered me for sale. The collector of these, also a Greek, had become financially embarrassed, and wanted ready money. The Rhodian pottery he had obtained in a curious manner. The Turkish authorities had excavated in Rhodes, but failed to pay their commissioner. To reimburse himself, he surreptitiously sold all the objects found, and reported that he had found nothing.

On my arrival in Constantinople, Hamdy Bey met me with great kindness and enthusiasm. He had the Sidon sarcophagi unboxed for me to examine, and authorized me to publish such account of them as I might wish. He desired to have them known in America, and, moreover, he desired to have Americans conduct excavations in the Turkish Empire. I was the first archæologist, he told me, who had treated him honestly and like a gentleman, and the Americans should not suffer because they had been honest. But in spite of all this friendliness the antiquities were not in Constantinople, nor had they even left Baghdad. This, however, was not Hamdy's fault. He had done everything possible, but the corrupt and energetic Governor-General of Baghdad, who believed that he could make something out of the Americans by holding back the objects until they gave him a present, and the indifferent and *fainéant* authorities at Constantinople, who never telegraphed when or what they said they would, had proved too much for him. I saw the Grand Vizier and the Minister of Public Instruction and urged them to expedite matters, but with many friendly words there was no action, and it soon became evident that the antiquities could not reach Constantinople for three or four months. I endeavored to make arrangements by which Hilprecht could take my place in the matter of the division, coming to Constantinople as soon as the objects should arrive, going over them with the authorities, receiving our portion, and cataloguing and arranging the part which was to remain in the Museum at Stamboul. But this proved unacceptable to the Museum authorities, who did not at that time know Dr. Hilprecht, while they did know me, and at last it was arranged that I should return to America, coming back to Constantinople when Hamdy notified me that the objects had arrived. In the meantime the Committee at home, naturally, would not consent to place another ex-

pedition in the field under Mr. Haynes. They had excavated for two years and seen no return of any sort. It was absolutely necessary that the division of the objects found should take place, and their portion be carried to America before they would consent to consider further work at Nippur.

I reported to Hamdy the conditions existing at Tadmor, Jerash, and Amman, and begged that steps might be taken to prevent the destruction of antiquities, especially at Jerash and Amman. I told him of the wonderful state of preservation of the ruins of the two last named places, but that now the Circassians had turned the theatre at Amman into a stable, while at both places they were tearing down priceless buildings to obtain stones to build their houses. He asked me to report this in writing, which I did; he presented my report to the Government, and obtained orders to protect the ancient ruins, with a speed and ease which surprised me. The following year I had the good fortune to be the intermediary through whom he was informed of the theft of the famous Siloah inscription, which had been cut out of the tunnel below the hill of Ophel at Jerusalem, carried away and sold to a collector. For greater security, a forgery of the inscription had also been made. Both of these Hamdy secured, and they are now in the Imperial Museum. In acknowledgment of my services, he invited me when they arrived to unpack them and assign them their position in the Museum.

It was the last week in September when I reached Constantinople. On the 13th of October I left there for America, going by way of Greece and Italy, in order to see what I could of the excavations at Athens, Naples, and Rome, and rejoining my family at Zurich in Switzerland. In Constantinople there was everywhere talk of approaching war, and I had heard and seen much of the unrest in the country and among the diplomats. Inter-

nal affairs were going from bad to worse through Asia Minor and the regions further eastward, where the Kurds were constantly becoming more unruly, while the Turkish authorities were encouraging them in their outrages upon the Armenians. Among the inmates of the Hotel de Byzance, where I stayed, was a storm petrel of a war correspondent. He had been reporting to a London Tory paper the movements of the Russians on their side of the Caucasian line, and their intrigues and plots in Turkey; and to a Liberal paper he had been reporting the outrages of the Kurds and Turks upon the Armenians, the corruption of the Turkish Government in the provinces, and the general disintegration of the Empire. The reports for the Tory paper about Russia were telegraphed or mailed from Erzeroum in Turkey, and the reports for the Liberal paper regarding the horrible conditions prevailing in Turkey were telegraphed or mailed from Tiflis on the Russian side of the border. I lived so much in these war rumors at the time that it had a strange effect upon me on my way across the ocean a little later.

We sailed from Antwerp on the 1st of November, and in a storm at sea I was thrown across the cabin, striking on my head, tearing off a considerable portion of the scalp, and all but fracturing the skull. When I was picked up I appeared to be conscious. I did what I was directed to do, and answered all questions sensibly, but in reality I did not know who I was. There came rushing through my mind scenes of disturbances in Armenia, of the marching of troops back and forth among the mountains, in which I seemed to have some part, while at the same time I had a subconsciousness that that was not my sphere in life. I fancied that I had gone insane, and that I should never recover my reason or be able to think intelligently or connectedly again. In vain I sought for a clue to my identity. Little by little I found myself able so to marshal and control the scenes which were passing hur-

riedly before my mind as to determine definitely that I was not a military officer. Then a name came to my mind as my own, the name of Hamdy Bey. An instant after there was the same subconsciousness that Hamdy Bey was not I, but outside of me. But from that as a clue I now began to work more definitely toward my own identification. I asked myself who and what was Hamdy Bey? At length I remembered that he was one of the Commissioners of the Public Debt, and I explored my consciousness to find whether I was connected with that institution, only to receive the answer, no. Then it flashed across me that Hamdy was also Director of the Imperial Museum, and from that I moved on to a perception that he was connected with archæology and exploration. When I had gotten so far I was able to identify my sphere of activity. My consciousness said that I was connected with archæology and exploration, and so I groped my way along until finally I remembered who and what I was, and astonished those about me by saying aloud: "Oh, now I know who I am!" They told me that it was a half an hour after the accident before I said this. During all that time I had felt not the slightest pain, even while the surgeon was sewing up the wound, the mental anguish had been so great, but as soon as the mental strain was relieved, I became conscious of acute physical pain. I have mentioned this little incident on account of its rather curious psychological interest.

It was the middle of April, 1891, when we finally received word that the Nippur "finds" had reached Constantinople, and I was dispatched by the fastest possible route to join them there. It was early in May when I arrived, but it was June before anything began to be done. I had arrived toward the end of Ramadhan, and nothing could be done during that fast. Then came the feast of Beiram, and nothing could be done during that feast. This was followed by the circumcision of the princes, and

this also precluded all possibility of official action. Then the brigands captured the Oriental Express, and carried off some Europeans, whom they held for ransom in the mountains. Delightful tales we heard of their gentlemanly and pious leader, Athanasius, who was said to hold prayers with his prisoners night and morning. There were sessions of the ministry constantly. Then the police spies, apparently to make amends for their failure to discover the brigands in the very heart of Constantinople, began to unearth plots. The Sheikh of the Mewlawi quarter of the city was accused of plotting to dethrone the Sultan and put his brother Reshid on the throne in his stead. He and some others were arrested and appear to have been sent to join "Mohammed's garden party." Nevertheless, acts of brigandage still continued, and the police spies became still more active. I was more among the Turks during this visit than at any time before, and saw more of the workings of the Government as it affected the natives. One man, who held a high position in the state, told me that within a short time fifty of his intimate friends had disappeared completely from the face of the earth. They were sent for to the Palace one by one, and that was the last that had been seen of them. No one was secure, for at any moment information might be lodged at the Palace by some spy, and the information of the police spies always seemed to be believed. Even on the occasion of the great illuminations of the Bosphorus, in honor of the Sultan's birth and accession to the throne, I found that the police agents went beforehand from house to house to tell the people how many lanterns they must show, and the man who did not obey their commands was likely to be reported to the Sultan the next morning as disloyal or a traitor.

The Armenian persecution was becoming more pronounced. Armenians were cast into prison on any pretext, and almost every week we heard of new outrages by

the Kurds. In Erzeroum the Turkish soldiers took a hand, and beat a number of inoffending Armenians to death in the streets, for which a number, not of Turks, but of Armenians were arrested and cast into prison. The American missionaries also were interfered with. Their books, after being passed by the censor at Constantinople, were seized in the provinces. New and more vexatious rules of censorship were promulgated; schools were closed on all sorts of pretexts; and everything possible was done to hamper their work.

The Armenian Feast of the Transfiguration afforded me a new opportunity of observing the persistence of ancient rites under new names and with new meanings. This feast occurs at midsummer, and not, as with us, on the 6th of August. The Armenians celebrate it by ascending mountains in memory of our Lord's ascent of the Mountain of Transfiguration. They also pour water on one another, with a merry-making and jesting which remind one of April Fool's day. In reality, this is the ancient Persian Feast of Abrizan, or Sprinkling, which occurred in midsummer and was celebrated in the manner described. It has been appropriated as the festival of the Transfiguration, because of the ascent of mountains connected with the observance of Abrizan, which suggested our Lord's ascent of the Mountain of the Transfiguration.

Toward the close of my stay, as I was returning from the Museum one day, there was a disturbance in the street, and a band of soldiers came marching by, going from the Palace to the Sublime Porte. My old friend, the Grand Vizier, Kiamil Pasha, had been deposed, and a new man put in his place. For a time Kiamil was kept under arrest in great danger of his life. Munif, the Minister of Public Instruction, was also deposed. But, fortunately, before this, my affairs, so far as these two dignitaries were concerned, were completed.

Some time in June the Sultan finally authorized the Museum to give us a portion of the objects found. It is the policy of the Turkish Government, while by its law of excavations it retains the right to take everything found, to give to the excavator a portion proportionate to the expense and risk incurred by him. Hamdy had kept his promise faithfully, and the Sultan's gift was a worthy one. I was told, however, that I must find my own way of passing the Sultan's gift through the Sultan's own custom-house; but this the ingenious Bedry arranged with little difficulty on the payment by me of £6 (he had suggested £20).

It was September before my work of unpacking, repacking, cleaning, photographing, and making casts and squeezes was completed, and I was ready to start for America, leaving matters in such shape that I felt confident that Haynes could take my place and go to Nippur to excavate. I arranged with Hamdy that the objects which were retained by the Imperial Museum should not be exposed or given to others to study, but that the University of Pennsylvania should be permitted to send over its assyriologist, Professor Hilprecht, to make the first study of those objects, and that in return for this he should catalogue and arrange them and such other Babylonian and Assyrian objects as the Museum contained. This arrangement was afterwards carried out most successfully, Professor Hilprecht doing an extremely difficult and valuable work, and at the same time making himself *persona grata* with the Turkish authorities by his efficiency and his willingness.

I reached home in October, 1891, and at once commenced agitating for another Expedition to Nippur under the lead of Haynes. He had resigned his position as Consul long before and returned to America, but he seemed to be the one available man for the work. Our excavations had been expensive, and the delays in ob-

taining results very tedious; some of the original subscribers were dead, others had lost interest, and the question was where we could get the money to continue the work in the manner proposed. It seemed to some, under the circumstances, preferable to abandon the excavations, and to devote ourselves to the publication of what we had found, sending Hilprecht to Constantinople to study and copy the inscriptions left there, and purchasing antiquities with such extra funds as might be available. This seemed to me to be a mistaken policy, and one which would fail to reap the best results from our previous expenditure. My work I regarded as but the beginning of the exploration of Nippur. The more speedily my excavations could be followed up and completed, the more certain we were to obtain great results. We had opened the door into a very treasure chamber, full of the most ancient records of the world. It was possible now to enter with ease, but if we delayed, the door would be closed and the golden opportunity lost. Dr. Williams, like myself, warmly advocated the dispatch of another Expedition under Haynes. In the spring of 1892 Dr. Pepper took the matter up, the money was raised, and a new expedition decided upon.

Our photographic work during the first two years had been to so large an extent a failure, that it was at first proposed to dispense with all photographic outfit this time, and so reduce expenses. It seemed to me that photography was essential, if it were our intention to excavate scientifically and report our results intelligently to the world. I believed in a very free use of photography; particularly in photographing the work in the trenches frequently and systematically, and photographing objects found *in situ*, and again in camp, with numbers corresponding to those used in the note-books and catalogues. I had failed to have the camera used as I wished during my work, but believed that another

attempt should be made to utilize it, and that such use of photography would greatly enhance the value of Haynes's work of excavation. Arrangements with Haynes were finally made at a meeting at Dr. Pepper's house in Newport between Dr. Pepper, Mr. Clark, Mr. Haynes, and myself. Photography was admitted, with the responsibility, in case of failure, resting upon me, and I was left to draw up with Haynes the plan of work, and to draft general instructions for the conduct of the excavations.

That summer I spent in copying my maps of trenches, plans, etc., and writing a volume of notes as large almost as this present volume, that Haynes might have before him complete details of the work of the first two years. It was my idea that he should, above all things, excavate the ziggurat of the temple and carry down the deep trench in front of it, which I had begun, to bed level, deepening and widening the same. I proposed that he should remove the buttress-like projection of the ziggurat on the southeastern side, up to the wall of Ur-Gur's ziggurat, and, further, that he should excavate beneath that ziggurat itself. In those excavations I believed that he would find the most ancient inscriptions, and at the same time, by means of them, trace the history of the temple in its buildings more completely and to a remoter period than I had done. The exploration of the temple I regarded as the work of first importance, but I also suggested that, if time and force permitted, he should re-open my excavations on Camp Hill (I), and complete the exploration of the great Cossæan structure at that point. Tablets he would find in greatest abundance on Hill X, and from my experience it seemed to me desirable to enter that hill by a section from plain level, which would, I was sure, give the best results, and at the same time enable him to study the strata far better than the method of digging which I had

pursued in the first exploration of the hill. At all places in that hill I was sure that there were tablets without stint. Further, if time permitted, I thought it desirable to examine a little more carefully the hills immediately adjoining the Temple Hill on the southwest and northeast respectively, VI and VII. We had found nothing in them, but their position in relation to the temple made me feel that they should be examined further. I was also anxious to see Mr. Haynes, if possible, complete the examination of the outer wall, Nimitti Bel (XI), and of the canal-bed of the Shatt-en-Nil, begun by me.

But it is needless for me to repeat my recommendations in detail. My object has been to help the reader who may wish to follow this subject further to see how my excavations and Haynes's are related. Here my connection as director with the great work of the University Expedition to Babylonia came to a close. How successfully Mr. Haynes carried out the work which we had planned, in his long and arduous excavations, covering three years, 1893 to 1895, and what wonderful treasures he unearthed, he has related in another volume. But the work of exploring Nippur is not yet completed. A very small part of the ancient city, and even of the temple, has been thoroughly excavated, and the treasures of antiquity which await a further discoverer are undoubtedly greater and more wonderful than those we have as yet unearthed.

APPENDIX A.

NOTES ON PLATES.

Plate I.

THIS plate contains objects of all ages and from different points. They were set up by Haynes to test his camera and the plates. The result was one of the best photographs which we obtained of objects found in the second year, and the only photograph of some which we possess. Many of the photographs both of the first and second years were ruined because the rolls and plates were kept too long in the heat of Babylonia, and altogether the photographs of both the first and second years proved far from satisfactory.

Commencing at the left-hand upper side the first object, a small toy-like clay figure of a camel rider, was found in the late Babylonian stratum on hill V. These figures are finished only on one side, the other being left flat.

The next object, the glass jug, as well as the similar glass jug at the other end of the upper row, was found in the very uppermost stratum on the Temple Hill (III.), and is not earlier than the Seleucidan period certainly. These jugs are not quite symmetrical in shape, the glass is extremely thin, and prettily colored, in the one case bluish, in the other purplish. In general, the glass objects found at Nippur were of late date, and while glass fragments were very numerous in the later strata, there were few or none in the earlier. We found, as already stated, glass axes and other objects made in imitation of lapis lazuli, turquoise, and malachite in the "jeweller's shop," belonging to the thirteenth and fourteenth centuries B.C.

We also found a small glass bottle with the door-sockets of Lugal-kigub-nidudu, circa 4000 B.C., and a few glass beads occurred in earlier graves; but these were exceptions, and the greater part of the glass found belonged to the post-Babylonian period. The small glass vase which forms the central object in this row is one of several of the same type, found with the slipper-shaped coffins. Another specimen is represented in plate VIII., Fig. 4. This type is not earlier than the Seleucidan period.

The inscribed object leaning against the first glass jug to the left is a clay brick stamp with reversed inscription of Sargon of Agane, 3800 B.C. I found several of these in the débris on the Temple Hill above Ur-Gur's platform; and one, along with a door-socket of Sargon, in the remains of a building of that monarch below the Ur-Gur platform. No stamped brick of Sargon was found by me; but Haynes was more fortunate. The inscription on this stamp reads: "Sargina, king of the city, king of Agane, built the house of En-lil."

The next object to the right of the glass jug is a fragment of a bowl or mortar of a hard and heavy volcanic stone. It was found in the débris near the shrine of Bur-Sin in front of the great entrance of the temple, and belongs to a period not later than about 2400 B.C. The same bowl is figured on the plate facing page 140. It represents a contest between a bird and a serpent. A considerable number of fragments of statuary, bas-reliefs, and inscribed bowls and mortars were found here. Some of these date from the pre-Sargonic period.

The small dog in front of the glass vase to the right of this is made of a hard glazed porcelain, almost white. This is represented in larger size in the plate facing page 128, and, as there stated, belongs to an early period, probably before 2000 B.C. In the first year we found in the same hill, V., but in a somewhat later stratum, a bitch with a litter of five puppies, made of the same material, and colored white.

The broken naked female figure suckling a child is, I suppose, an Ishtar idol or sacred figure. Quantities of such little

PLATE I.

clay figurines of the goddess, more often without the child, were found in all the Babylonian strata from about 2000 B.C. onward. We also found a number of the clay moulds in which these were made. This type is flat and unformed behind, a sort of high relief. The oldest type is that represented in plate II., figures 9 and 10, a less perfect specimen of which is shown on this plate, immediately beneath the camel rider. Those were found in hill X., and are from the middle of the third millennium B.C. This type was found more particularly in hill V. Gradually these figures became more decent. First the sexual parts were suppressed, and finally the figures were clothed.

The small clay tablet with a low relief next to this was found in débris in the Temple Hill, about eight metres beneath the surface, and should, therefore, belong to a period not later than the middle of the third millennium B.C. It represents a tree, apparently a palm, and on either side, rampant, an animal resembling a long-horned goat, each with the head turned backward, and the forefeet bent, almost touching the trunk of the tree. Length of tablet, .085 m., breadth, .076 m.

The bearded head to the right of this is in unbaked clay. This was found in the débris on hill V., about 2 metres below the surface. I should judge from its appearance that it belongs to the Assyrian period. Several other heads of a similar character, but very much inferior to this artistically, were found on the same hill. All the others were baked.

The fragment of a naked female figure holding the breasts with the hands, standing on top of the brick on the left-hand side, has already been noticed.

The brick on the left-hand side beneath this bears an inscription of Ur-Ninib, king of Isin, circa 2600 B.C. This was found in a pavement in the great court of the temple to the southeast of the ziggurat, above the pavement of Ur-Gur. The brick at the right-hand side of the same line bears an inscription of Esarhaddon, king of Assyria, 681–669 B.C. This brick is unusually large. It was found in later débris on the Temple Hill. Other bricks of this king, of the ordinary size, bear an inscription in a different script. The inscriptions on

these bricks indicate that both of these kings restored the temple of Bel.

The inscribed stone between these bricks is a diorite door-socket of Bur-Sin, of Ur, from his shrine by the great entrance to the temple. On the under side, not visible in this position, is a rudely scratched inscription of Lugal-kigub-nidudu. Two door-sockets of this king were found, one at the inner, one at the outer door of his shrine. The inscriptions on these are votive, merely recording the name and titles of the king, and the fact that he built the temple of Bel.

The two double figurines of clay, in the lowest line, at the extreme right and extreme left, are from the late Babylonian or Persian strata. None of these were found entire, but only the upper parts. They were most common on hill X., but were also found on hill I. They are flat, and unworked behind, like the figurines from hill V., described above. Sometimes similar single figures were found. The only musical instruments represented are the double pipe and tambourine or drum.

The grotesquely rude clay figure of a man carrying some object over his shoulder, comes from the burnt rooms of the Ine-Sin period, on hill X., and belongs, therefore, to the middle of the third millennium B.C. This is presumably the Bel corresponding to the Beltis figures shown in plate II., figures 9 and 10. These figures are all hollow within, and worked on both sides. This fragment is. 08 m. in height. Other specimens of the same type are represented in the plate facing page 128. What the objects carried by these figures over the shoulder are, I do not know. Besides these human figures found in the burnt rooms at X, there were found also one or two fragments of grotesque clay figures of bird-headed animals and the like.

Next to this, to the right, is a piece of a clay tablet in low-relief, representing the upper part of a man, with a high, horned headdress. The ears are formed and attached like an animal's ears. To his right the figure holds in both hands a staff with a target on top. The length of the fragment is .065 m., the breadth of the tablet, .055 m. This was found in

hill V., four metres or more below the surface, and may date from 1000 to 1500 B.C.

The fragment of a clay tablet to the right of this is from the same hill, and presumably of the same period. It represents the lower part of a man, walking, and carrying a spear or a staff. This fragment is .06 m. square. All these tablets are unworked on the reverse. Besides those represented here we found one of a man with a fringed garment and a staff; one of a three-branched, candlestick-like object; one representing an indecent scene between a man and a woman; and several representing animals, two of which are shown in the next plate.

Plate II.

Fig. 1 is a clay rattle in the form of a chicken, .085 m. in length. This was found in hill VI., not far below the surface, and may belong to any time from the Persian period onward.

Fig. 2 is a fragment of a clay tablet, representing a wild boar, of excellent workmanship. Length, .089 m., height, .059 m. It was found in III., A, in a long corridor adjoining the temple on the southwest, a structure which belonged, I should judge, to the Cossæan period. Several similar tablets were found later in the temple, and in hill V., on the side looking toward the temple.

Fig. 3 is a clay tablet representing in low-relief a lioness-like animal. Length, .095 m., height, .045 m. This was found in hill V., two to four metres below the surface, and belongs to the later Babylonian period. Among the other tablets of animals found in this hill was one representing a dog, one representing an Indian humped ox, and a very good one representing gazelles.

Fig. 4. Clay horse with rider. Height, .17 m., length, .11 m. The rider wears a very high, nightcap-like headdress. This was found in a child's grave, near the surface, on the Temple Hill, and was, presumably, a toy. Similar figures were frequently found in the graves of the Parthian period.

Fig. 5. Clay elephant; height, .083 m.

Fig. 6. Clay table; height, .093 m.; diameter, .065 m.

This and the preceding were found in the first trench run in the western nose of hill V., in the first year of the excavations. This trench was begun at a low level, and there were found in it on the first day, besides these two objects, a few inscribed tablets of the late Babylonian period; an egg-shaped jar, without handles, decorated with a simple line pattern, containing, in the earth within it, fish bones, ashes, and pieces of wood; two two-handled jars, the handles formed by running a stick through the clay; a clay horse's head; three small broken jars of the shape represented in plate VI., Fig. 12; and a large, hollow phallus, .24 m. in height, of rude workmanship. I fancy that, with the exception of the horse's head which may have been dropped there at a later period, all these objects were late Babylonian. A tablet found not far from this spot was dated in the first year of Evil-Merodach, 561 B.C. It records a gift of fifteen measures of grain. The elephant and table were presumably toys buried with a child.

Fig. 7. A clay bas-relief representing a contest between a man and a lion; unworked on the reverse. On the plinth are five illegible Aramaic characters. This was found in the débris in one of the rooms on the Temple Hill, southeast of the ziggurat. From the workmanship and the Aramaic characters I judge that it may belong to the seventh or eighth century B.C. It is figured in Plate XXVI., Vol. I., Part II., of Hilprecht's *Old Babylonian Inscriptions*.

Fig. 8 represents one of seventeen inscribed objects of magnesite, of doorknob-like shape, found in the "jeweller's shop" on the Temple Hill. They average .045 m. in height; diameter of base, .068 m., and of upper surface, .07 m.; diameter of hole, .01 m. There was an eighteenth similar object of ivory. There were with these a few other objects of a different shape, resembling these, but much more elongated, with the base larger than the top, and the latter more convex than in the doorknob shape. Comparing these latter with some of the specimens in our collection of phallic symbols, it was evident that they were conventionalized phalli. This conclusion reached, it seemed clear that the doorknob-like

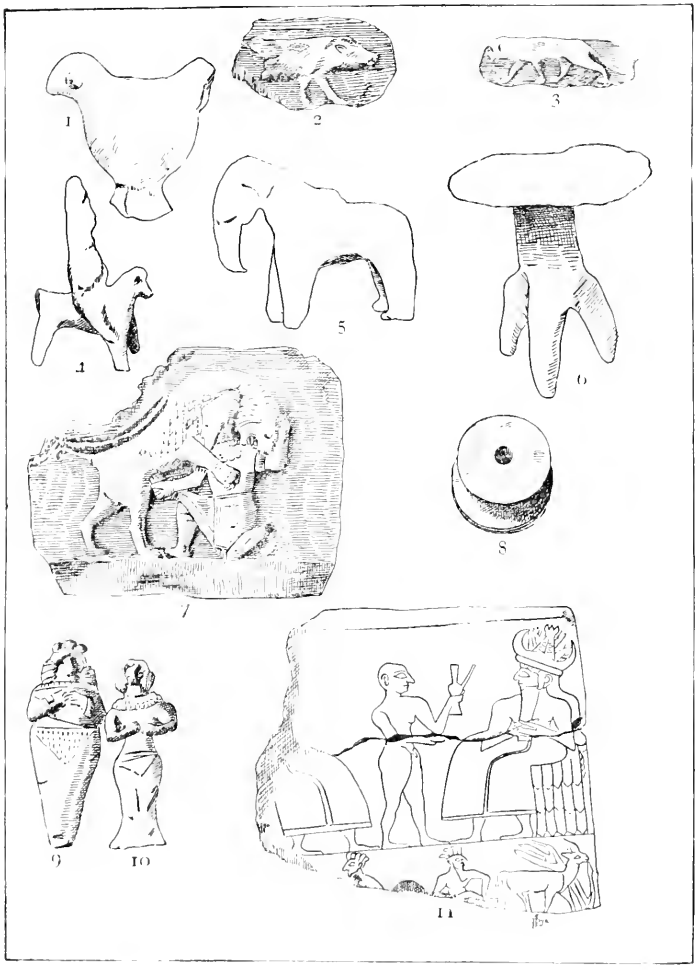


Plate II.

objects were still more conventionalized forms of the same symbol. It was very natural that the mystery of life should excite the worshipful admiration of primitive man, and the world over the *penis* and *vulva* appear as religious emblems. In Babylonia we are able to trace in detail the process of conventionalization of these symbols, which went hand in hand with the development of dress, and of those ideas of propriety which forbid the mention or exhibition of the sexual parts. I have already pointed out that the nail-headed cones, shown in the plate facing page 238, are phalli. But along with these conventional forms, cruder and more naturalistic forms of the phallus persisted in Babylonia down to a late date, as they did also in Greece. The so-called boundary stones, of which several are exhibited in the British Museum, containing important inscriptions, and covered with curious zodiacal-like, mystic figures, are in their upper parts unmistakable, and even offensive, representations of the male organ, as were the famous Hermes columns in Athens. The inscriptions on the doorknobs are all votives to Bel by various kings of the Cossæan dynasty.

Fig. 9. A grotesque statuette of a naked female, holding the breasts ; sexual parts conspicuous ; nose absurdly prominent ; headdress like court wig ; shape below like mummy ; length, .115 m. This is presumably a Beltis figurine. The type was common in hill X., in a stratum belonging to the middle of the third millennium B.C. The mummy-like form of the lower part should be compared with the character for man in the archaic Babylonian script (*cf.* the door-socket of Sargon, plate facing page 242, lines 4 and 6). That character represents a man of just such a mummy form lying on his back.

Fig. 10 is a somewhat different type of Beltis figure from the same place ; height, .105 m. In this, as in the preceding, the nose is bird-like, and the eyes lobster-like ; there is a necklace about the neck, and the breasts are held by the hands ; but the sexual parts are not so conspicuous, and the lower part is not mummy shaped. This type is, in fact, a slight advance from the preceding.

Fig. 11. An incised slab of white marble, in two pieces, the larger, .18 × .10 m., the smaller, .16 × .07 m. Thickness of slab, .0275 m.; reverse unworked. The edges of the two pieces do not quite join. At the right-hand upper corner the god Bel is seated on a throne. He wears long robes, and on his head a high, horned crown. His beard is long, his nose prominent, and the eye large out of proportion. The head, which is in profile, is turned over the left shoulder, to enable the artist to represent the body in front view. The left hand crosses the breast; the break of the stone runs through the right hand and arm. The feet of this and all the figures are exceedingly long and flat. In front of Bel stands a worshipper, naked and uncircumcised, holding up toward the god with his left hand a long, thin vessel, with a very long spout, similar to those used by worshippers on Egyptian wall paintings, but unlike anything found by me in Nippur. The right hand and lower arm of this figure are broken; the nose is absurdly long, the face and head smooth; the head is in profile, the body in front view. Behind him was a duplicate of the Bel figure, facing in the opposite direction; but the upper part is broken off. Below these is an incised line, and below this the representation of a man, with a crown-like headdress, hunting gazelles, which nibble at reeds. This picture was repeated twice, the two standing back to back. All of one picture and the lower part of the other are broken off. Between the two pictures there was a hole through the slab, .018 m. in diam. The work on this slab is rude, but forceful. It was found in the débris in one of the rooms of the last reconstruction on the Temple Hill, to the southeast of the ziggurat, not far below the surface, but is manifestly ancient. It is figured as Plate XVI., in Vol. I., Part II., of Hilprecht's *Old Babylonian Inscriptions*. On the same page is a representation of a similar slab found by Haynes on hill X. This latter contains a brief dedication by a certain Ur-En-lil, *i. e.*, "Man of En-lil," to his god En-lil, or Bel. From the form of the characters in this inscription Hilprecht argues that it is very old, belonging, perhaps, to a period not far removed from 4000 B.C. If his argument is valid for that slab, it fixes the date of

this slab also. Such slabs or tablets were, as we learn from an inscription of Ashurbanipal, hung up on the walls of the Babylonian temples by those who wished or had received something from the gods. Presumably the clay tablets described above, and the inscribed lapis lazuli tablets found in the "jeweller's shop" served a similar purpose.

Plate III.

Fig. 1. A silver ear-ring, or more probably nose-ring, of rich pattern; diam., .05 m. This was found on hill V, near the summit, in a grave of bricks about two and a half metres below the surface. There were no bones found in this grave, but two vases, one with remnants of grain within; this nose-ring, and another of the same metal and ornamented with stones, but smaller; a silver seal ring, the stone in which had decayed away, and one hundred and five beads of a necklace, of different stones, silver, and, apparently, lead. Judging from the stratum it may have been late Babylonian or Persian. Beads were among the most common objects found in graves, and I have a record of as many as 600 from one grave. The use of necklaces would seem to have been common with men as well as women.

Figs. 2, 3, 4, 5, 6, 12, and 15 are iron knives, hatchets, spear- and arrow-heads from graves, especially in hill V. In one tub-shaped coffin, of a period earlier than 1000 B.C., and probably nearer 2000 B.C., we found eleven iron arrow- and spear-heads, together with a razor-like knife. I have not figured here any of the copper objects; but we found, as stated elsewhere, knives and swords of that metal. We found nails and spikes of both metals. We found also saws, knives, and arrow- and spear-heads of flint, and one jade axe. As already stated, there were no stone, copper, and iron ages in the ruins of Nippur.

Fig. 7. A pair of copper tongs, toothed, length, .077 m. These were found in the late strata on the Temple Hill.

Fig. 8. A copper nose- or ear-ring of a very common form, designated by us lyre-shaped, found in Babylonian graves certainly from 1500 B.C. onward. They were often wound

with silver wire. Sometimes they occurred in pairs, sometimes singly. An average specimen of this type measured .04 m. across the base, with a height of .025 m. There were of course nose- and ear-rings of other shapes, and these were frequently set with jewels. The stones most commonly used for this purpose were pearls, which were also used for beads of necklaces.

Figs. 9, 16, 27, and 28 are specimens of the clay drains described in Chapter IX. Fig. 27 represents the rudest type, where the drain was made of jars, with the bottoms broken out, set one on top of another. These drains were packed about with all sorts of rubbish, in which we sometimes found ancient tablet fragments. These drains were often quite deep, and we sounded some to a depth of thirteen or fourteen metres. The average diameter is about a half-metre. Fig. 9 shows the upper rings of one of the most carefully constructed of these drains. Into the top of this fits, inverted, the piece shown in Plate VI., Fig. 4 ; and on top of this the sieve, shown in Plate VI., Fig. 7.

Figs. 10, 11, and 17 are copper bracelets and anklets of ordinary types from Babylonian graves. Almost all of these are rude, making little pretence at ornamentation. We found great numbers of these, sometimes as many as six in one grave.

Figs. 13 and 14 are ivory pins from Babylonian graves. Some of these were hair pins, some looked like knitting-needles. A few were ornamented with line patterns, but there was no elaborate ornamentation before the Seleucidan period. After Greek influence began to be felt, we found pins ornamented with female figures, some of them very pretty. We found besides these ivory pins similar pins in copper, together with a number of needles of the same metal. We found also square-headed copper styli, for writing on clay tablets, and copper pins of another sort, similar to those used by the natives for putting kohl in their eyes, and apparently intended to serve the same purpose. We found likewise pins of bone, and a few combs of the same material, with others of ivory. Some smaller toilet objects were made of mother of pearl, and

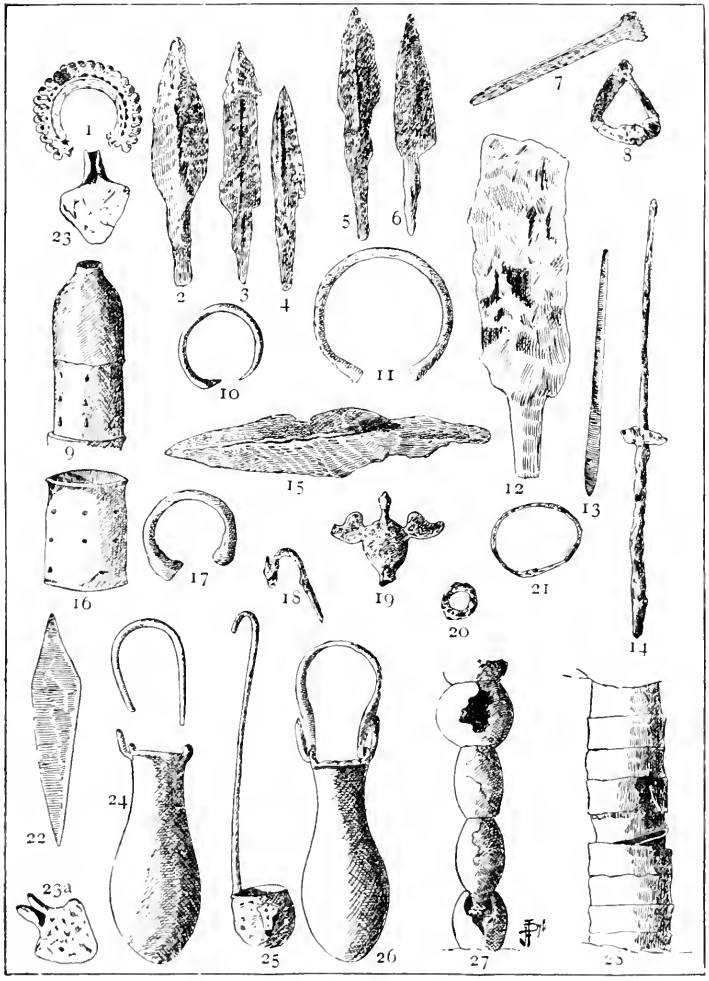


Plate III.

more were ornamented with pieces of this material. The most elaborate articles found were composed of copper and ivory combined, the rudest were of clay.

Fig. 18 is a copper fish-hook, only a couple of which we found. In length they were about .05 m.

Fig. 19. A copper bird, not unlike a tortoise in shape; end of tail and left wing broken. On the reverse it is flat, somewhat hollow in the centre, and was evidently intended to be fastened on something. Length from head to tail, .07 m.; breadth from wing to wing, .085 m. It was found near the surface on the Temple Hill to the southeast of the ziggurat, and is apparently late. There was found in hill V. a copper figure in human form, with two pairs of wings, and a small tail curved up behind. The height of this figure was .08 m. Apparently it was a demon. Judged by the strata, this demon should belong to a good Babylonian period. These were the only specimens which I found of metal cast in the shape of figures. I have already noticed a few late pieces of ivory carving; we found also a number of figures in bone, some of them jointed like modern dolls.

Fig. 20. An iron finger-ring. We found rings in copper, iron, silver, and gold, the latter generally late. Some of them were seal rings, the seals being in some cases cut on stones set in for the purpose, and sometimes on the metal itself. The work was generally rather rude.

Fig. 21. A copper bracelet of light and graceful work, closed by a sort of tie, also of copper; diameter, .06 m. It is a much more elaborate and finished type than the ordinary bracelets and anklets, shown in Figs. 10, 11, and 17. This particular specimen was found near the surface on the Temple Hill, and is therefore post-Babylonian; but we found a few more of similar type in somewhat earlier graves.

Fig. 22. Feather-shaped ivory pin; length, .105 m.; greatest breadth, .023 m. These were found in great numbers in graves on all the hills from the Babylonian period onward into the Parthian and Sassanian. For what they were used, I do not know.

Fig. 23. An iron, spade-like object; length, .078 m.;

breadth, .06 m. This seems too blunt and too large for a spear-head, and while far smaller than our spades, it is actually about the size and shape of the spades which I saw used by the Arabs of to-day. I presume, therefore, that it was in fact a spade. It and the similar 23a were found in hill VIII., and belong approximately to the time of Ashurbanipal. These were the only agricultural implements found by me, unless a couple of large curved copper knives found in tombs may have been sickles and not swords.

Fig. 24. A copper bucket, with handle of copper wire (broken); height, .18 m.; greatest circumference, .25 m.; diameter of mouth, .017 m.; height from mouth to top of handle, .097 m. This was found in a trench far back on the western side of hill I., from three to four metres below the surface. It was in a Babylonian coffin, at the left of the feet, along with a small blue-enamelled vase. There was also in the coffin a lyre-shaped copper nose-ring, wound with silver wire, and a quantity of ashes, besides bones. It was clearly a coffin of a good Babylonian period.

Fig. 25. A copper ladle, length, .287 m.; diameter of bowl, .042 m. This and Fig. 26, which is a copper bucket, practically identical with 24, were found in a grave in hill V. There was a tub-shaped coffin about three metres beneath the surface, under a wall of unbaked brick. This had been closed with palm and tamarisk wood, and cemented over with mud. In the bottom of the coffin was a mat. An inkstand-like piece of pottery, a small, blue vase, almost ball-shaped, with short, thin neck and small opening, a copper bowl, a copper ladle (Fig. 25), a copper bucket (Fig. 26), a lyre-shaped copper ear- or nose-ring, one copper seal ring and a fragment of another, a fragment of a bracelet of thin copper wire, a copper kohl pin, and a piece of a flat ivory pin were found by the feet. On the breast was a copper mirror, under which the woollen cloth of a garment was preserved. Here lay also a number of beads, some lapis lazuli, and others of a red color; and an oval agate seal. This burial was unmistakably Babylonian, and apparently of the Cossæan period. Later, on hill V, we found other graves containing similar ladles, buckets, mirrors,

and bowls of copper, for one of which we were able to determine somewhat more definitely a Cossæan date.

Plate IV.

Fig. 1. A handsome copper bowl, worked within in a pattern ; hammered ; diameter, .195 m. ; height, .0375 m. This was found in a tub-shaped coffin, four metres below the surface, in a tunnel beneath one of the western noses of hill V. In the same coffin was a broken knife or dagger, a lyre-shaped nose-ring, a heavy copper pin or nail, and a cone-shaped Babylonian seal, representing a worshipper before an altar, with the usual column, sun, stars, and moon. Evidently the grave was Babylonian, and from the position it seems clear that it was not late Babylonian.

Figs. 2 and 4 are good specimens of the ordinary large jars of Babylonian workmanship. Each is about a half a metre in height, of thick, light-brown clay, unglazed, the former ornamented by a double line, and the latter by four lines of bead pattern. Such pottery was found in the graves, and presumably these are fair specimens of domestic pottery. Urns similar in shape to this, and to Plate VII., Fig. 7, and Plate VIII., Fig. 2, were used for burial purposes in the most ancient periods. When intended for this purpose they were made of a peculiarly heavy pottery. Such jars were from a half, to three quarters of, a metre in height.

Fig. 3. A pair of silver bracelets, ornamented with a studded design, rusted together ; diameter, .065 m. ; breadth of band, .06 m. These were found with some beads in a tub-shaped coffin, four metres below the surface, in a tunnel under one of the noses of hill V. They belong to the same period as Fig. 1.

Fig. 5. Clay horse, with bridle ; height, .11 m. Found in a late (Parthian) tomb on the Temple Hill. Similar clay horses were frequently found in Parthian graves. Sometimes they had riders, and sometimes not ; sometimes they were colored, black and white or red and white, and sometimes they were plain. Rarely they were covered with a blue enamel.

Fig. 6. One-handled jar, plain, unglazed, thick-walled,

pointed below ; height, .22 m. ; diameter of opening, .038 m. ; greatest circumference, .265 m. This type was characteristic of the upper strata in the highest part of hill I., in which were found Parthian, Sassanian, and Kufic coins. This particular jar was sealed with bitumen.

Fig. 7. This composite piece of pottery consisted of two parts : a clay tub with a drain hole at the bottom, .46 m. in diameter, and a triple row of jars joined to one another by a framework of clay, the second piece fitting into the first. This was found close to the surface, on the top of hill I., a little to the south of the site occupied by our camp the first year, in the stratum of the Jewish houses. With it were a number of jars, some of the same type as Fig. 6, and some without handles. Some of these were empty, some were sealed with bitumen. Parthian coins were found by these. I have supposed this to be the show-case and outfit of some Jewish phlebotomist of the Parthian period.

Fig. 8. Copper vase of graceful shape, but not quite symmetrical ; height, .171 m., diam. at mouth, .05 m., diam. at broadest part of bowl, .065 m. This was found in a tub-shaped coffin in hill V., about 4 metres below the surface. The coffin had been broken, and mended with bitumen at the foot. Within the coffin, together with the bones, and some fragments of palm wood and cloth, there was by the feet a copper ladle, and by the head an inverted copper bowl, beneath which lay this vase, a long-handled copper sieve, and fragments of a pair of copper objects, the use of which is unknown. This vase belongs, therefore, to the same date as Figs. 1 and 2 of this plate, and 24, 25, and 26 of the preceding.

Plate V.

Fig. 1. This two-handled jar of plain, unglazed clay, about .20 m. in height, is one of a large number of pieces found in a couple of rooms near the mouth of the great trench, at the western nose of hill V. (see plate facing page 250, in Vol. I.) These rooms were stuccoed in yellow and pink, and the tops of the walls were two metres below the surface. The objects found there belonged to a good Babylonian period.

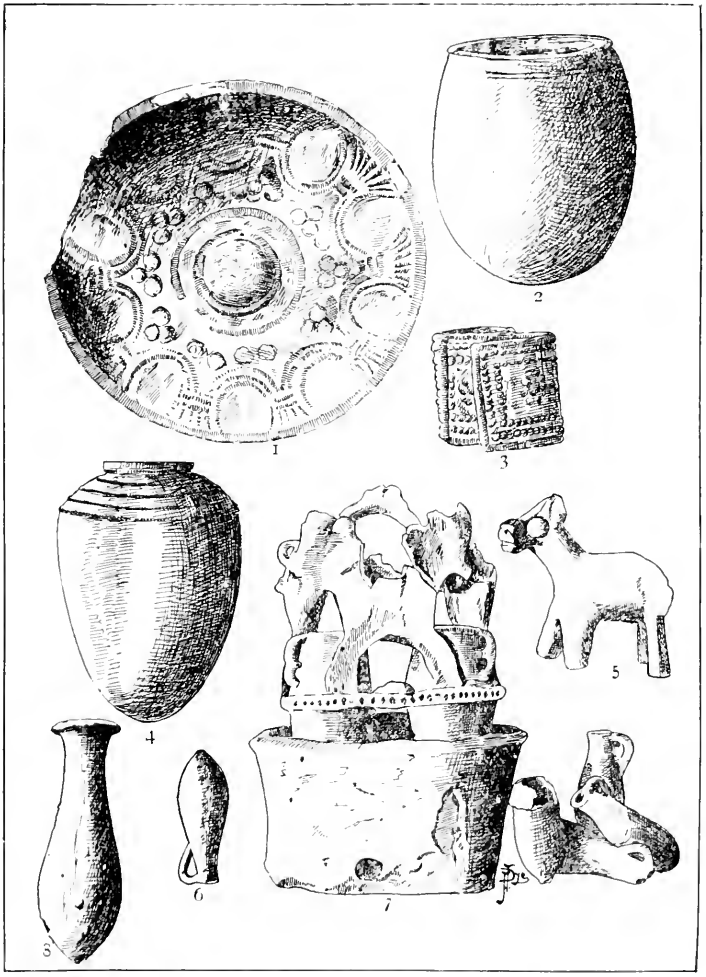


PLATE IV.

Figs. 2, 5, and 6 are rather small, perforated, sinker-like pieces of stone, apparently intended for weights. Numbers of such stones were found at various points. I also found stone weights of other forms, including ducks of lapis lazuli and hæmatite. One or two broken pieces were inscribed with figures showing the weight, but almost all were uninscribed. In one of the rooms on hill V., shown in the plate facing page 200, five metres below the surface, in a hole in a small brick flooring in the corner of the room, I found fourteen cylindrical, barrel-shaped objects, chiefly of hæmatite, apparently weights. These belong to a period about 2000 B.C. They were weighed in Constantinople by Professor Long of Robert College, and his description is attached.

No.	1.	Hæmatite fusiform,	G. 172.90
"	2.	Granite "	167.97
"	3.	Hæmatite "	83.60
"	4.	" "	43.05
"	5.	" "	9.05
"	6.	" spheroid,	5.10
"	7.	" fusiform,	4.47
"	8.	" "	4.98
"	9.	" "	4.73
"	10.	" "	4.31
"	11.	" "	4.00
"	12.	" "	3.98
"	13.	" "	3.37
"	14.	" "	1.80
"	15.	" "	0.75

Fig. 3 is one of three large, rude, clay jars, found near the surface in one of the first trenches on hill V. This jar was .24 m. in height; diam. of opening, .045 m.; greatest circumference, .614 m. All three jars were full of earth, in which were ashes, date kernels, and remnants of bones (apparently birds' bones). In the same trench were found on the same day, not far from these jars, a very ancient round tablet, bearing the names of four prehistoric kings of Nippur; 15 tablets from the reigns of Samsu-iluna, 1900 B.C., to Cambyses,

500 B.C. ; a number of tablet fragments ; three large clay spindle whorls ; and a large clay triangle, such as are used to stand pottery on for baking in the pottery furnaces. It was certainly a confusing "find," and one characteristic of the upper strata of hill V.

Figs. 4 and 11 are jeweller's furnaces. Another type, several of which we found, and which was in fact the more common type, had four legs. These were on the average about .09 m. in height, and .08 m. square. All were of a black clay, or burned black, and most of them were ornamented with rings, like Fig. 4, less often with lines, like Fig. 11, triangles and wedges. The latter, Fig. 11, is only a fragment, and differs in shape from all the others found, being a long trough, while the others are square. These were found in good Babylonian strata on several of the hills. We found also a few stone jewelry moulds.

Fig. 7. This jar, .18 m. in height, was found in the trench shown in the plate facing page 214, .25 m. from the foot of the slipper-shaped coffin near the surface, and .15 m. below the surface. It belonged, therefore, to the post-Babylonian period.

Figs. 8, 12, 13, 15, 18, and 20 are specimens of distaff and spindle weights. The first three are baked, the last three unbaked. These were found in very great numbers through all strata on all hills, excepting the Temple Hill, where they appear only in the later strata.

Fig. 9. Flask-shaped bottle of very brown burned clay, with remnants of blue enamel. Height .105 m. ; breadth .08 m. ; thickness of walls of mouth .023 m. ; diam. of opening .032 m. This was found on hill V., in the same place as Fig. 1, and belongs to a good Babylonian period. We found several other pieces of this same form, but none so good as this.

Fig. 10. Clay lamp, lower part very massive, chipped here and there, black-brown from fire ; length, .15 m. ; height, .072 m. We found several lamps of this shape, sometimes plain, sometimes blue enamelled, and a few in copper, in the upper strata in hills I., III., VI., and X. As far as I could judge the lamps of this shape were all post-Babylonian. The most elabo-

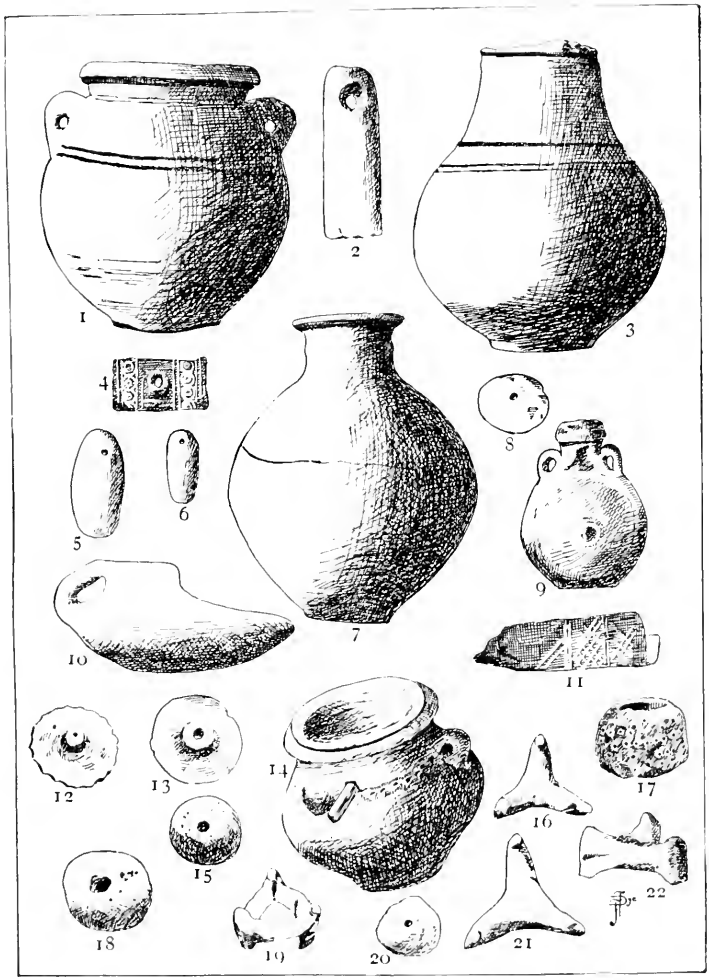


PLATE V.

rate and the largest which we found was in the rooms of the last reconstruction on the Temple Hill. This had a very thick greenish-brown glaze. There were two legs below to steady it, and above there was a female face of Greek type, and very well executed, considering the material. It was evidently Seleucidan. We also found older lamps of a squarish shape.

Fig. 14. Clay jar, reddish-brown, two handles with round holes, wedge pattern around neck, horn like excrescence on neck ; in neck, two holes opposite one another for stick to pass through fastening cover on jar. In the cover, corresponding holes for stick to pass through ; the upper part of cover forming a saucer. Height, .089 m. ; greatest circumference .335 m. ; diam. of mouth, .08 m. This was found in hill VIII., and belongs, presumably, to the Assyrian period, 650 B.C.

Figs. 16, 19, 21, and 22 are rests on which to set pottery in the bake furnaces. Some were enamelled and some plain. They were found everywhere in great numbers. The rests used in pottery furnaces in this country to-day are strikingly similar in shape.

Fig. 17. Clay sieve, shape of small jar, holes in side walls almost to rim, bottom much chipped, opening irregular, hand-made ; height, .036 m. ; diam. of mouth, .027 m. This was found in the late strata on the Temple Hill. A similar cullender-like piece of pottery was found later in the Cossæan rooms to the southeast of the temple. Although this is itself late, it reminds me by its use of holes, of the oldest piece of pottery which I found. In the gate-like breach before the temple, in some burned houses, 3 metres below plain level, and therefore more than 5 metres below the Sargon level, I found a thick clay board half a metre in length, and a little more than half as broad, with a handle in the middle in front, at the point where the curvature began. This board was perforated with a dozen or more large holes. In the same room was a pottery drain. The clay board and the drain must have belonged approximately to the earliest settlement of Nippur. The workmanship of the clay board was good and substantial. What the use of the object was, I do not know. I have not represented this in the plates, because I have no

photograph of it, and the drawing in my note-book is almost too crude to reproduce.

Plate VI.

Fig. 1. Plain clay jar; height, .36 m.; greatest diam., .195 m.; diam. of mouth, .118 m. These jars were found most commonly in connection with Babylonian burials, and in the earth in them were found fish-bones, ashes, date kernels, and the like.

Fig. 2. Reddish-brown clay bowl with very delicate walls; height, .088 m.; diam. of mouth, .128 m. These delicately formed, thin bowls were generally used, inverted, as covers over the jars containing food in connection with Babylonian burials. Occasionally, however, they were themselves used to hold the food.

Fig. 3. A Babylonian drinking-cup of clay, height .112 m.; circumference, .18 m.; diam. of mouth, .048 m. These cups were found in considerable numbers in connection with Babylonian graves, especially in hill V. Ordinarily three or four were found together.

Figs. 4 and 7 are the stopper and sieve of a clay drain-pipe, and have been already described in connection with Fig. 9 of plate III.

Fig. 5 represents another type of the common Babylonian pottery, and was found in hill V., in connection with a grave. Most of these ordinary types persevered through the Seleucidan, Parthian, and Sassanian periods This is a plain, clay jar, rounded below; height, .08 m.; cir., .27 m.; diam., .065 m.

Fig. 6. A large jar with very heavy walls, resting on three legs, the mouth horizontal. There was a large slit in the top near the mouth, and a ridge corresponding to it below and within. There had been a handle of some sort, but this was broken off. It was about .20 m. long. What use it served I do not know. It was found in the earth in hill V., in the same stratum with tub-shaped and urn-shaped Babylonian graves. A somewhat similar piece of pottery was found in the Cossæan rooms in front of the temple.

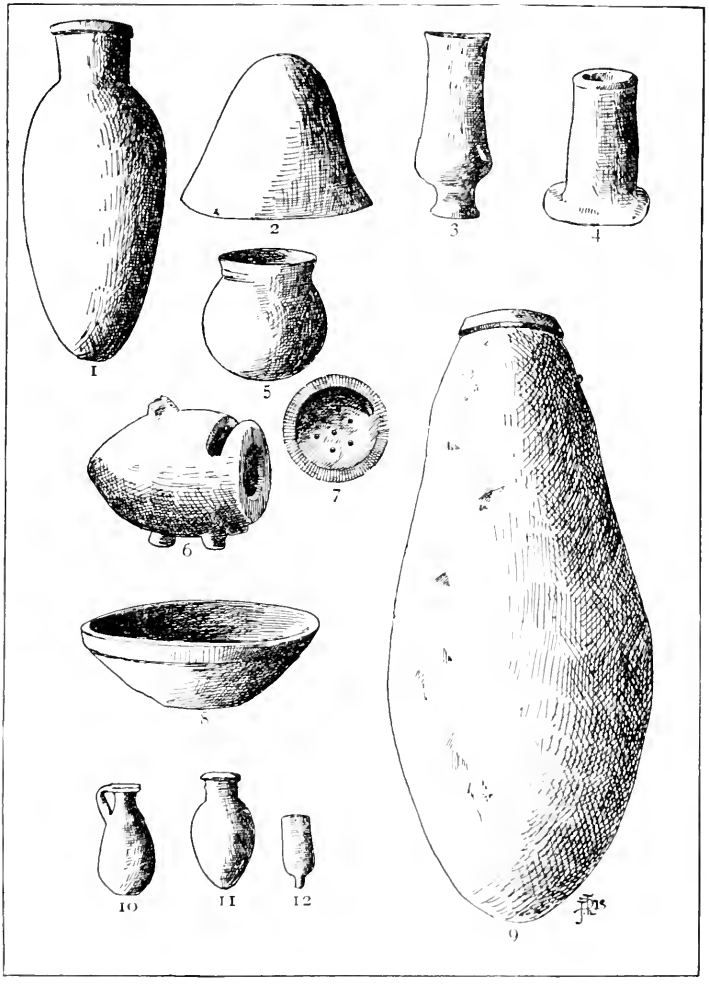


PLATE VI.

Fig. 8. Plain clay dish with canalized rim ; height, .045 m. ; diam., .157 m. This was found on hill V., in the upper strata. It was, however, a very common form everywhere, from the Babylonian time on. Sometimes they were hand-made, sometimes wheel-made, rarely blue-glazed, generally plain.

Fig. 9. Large, plain, clay jar ; height, .83 m. ; greatest diam., .35 m. ; diam. at mouth, .108 m. This specimen was found in connection with a Babylonian grave, and contained in the earth within fish-bones and ashes. This was a common and very useful form of jar, and we found them at all depths. They are found all over Babylonia, and Coloman informed me that some were found by the Germans when they dug a few holes at Salahieh, near Deir, on the Euphrates. Occasionally they are a metre in height. Some of them are spiked below, like Fig. 12, some are pointed, and some round. Sometimes they are bitumened within ; occasionally they have bung-holes. Some were marked in black with curious characters, which may have been a species of trade-mark. They were used from the earliest times as jars for the storage of water, wine, grain, and the like ; in fact they were the tanks, wine closets, and storerooms of Babylonian houses. The water firkins represented in the cut on page 154 are of this type.

Fig. 10 is practically identical with Fig. 6 of Plate IV. That was found sealed with bitumen. In the earlier time it was more customary, apparently, to seal jars with clay, and we found a number of such seals with the impressions of their owners' signets. We found also door and box seals of clay. In some cases a ribbon or cord had originally passed through the clay. To this day it is the custom in Irak to seal up a door in a khan containing goods which the owner wishes to leave in store with little pats of clay stamped with the owner's seal. The same custom prevailed in ancient Babylonia, as shown by some of the clay seals found by us. More rarely we found pieces of bitumen stamped in the same way.

Fig. 11 is a type of plain clay jar very common in the remains of Nippur at all periods, and in all sizes from .08 m. up to .30 m. and more in height. The form is much like that of Fig. 1, but it is ornamented by a raised rim around the neck.

Occasionally this is varied by incised lines, hatchings, beading, etc., especially by a band of wedge-shaped markings at the top of the bowl.

Fig. 12. Another type of Babylonian cup, even more common than that shown in Fig. 3, and less well made. This specimen was found in a burial in hill V. Height, .118 m.; circumference, .187 m.; diam. of mouth, .048 m. Often several of these cups were found in one grave. Frequently they contained a sediment, or remains of kernels of various grains, showing that they had contained food and drink for the dead. This specimen was full of small seeds and burned wood.

Plate VII.

Fig. 1. Egg-shaped, two-handled vase, blue- (green) enamelled, rim somewhat broken, otherwise well preserved. Height, .16 m.; circumference, .344 m.; diameter of mouth, .04 m. This was found in a tomb of brick, the roof in the form of a false arch, in a tunnel in hill VI., some four metres or more below the surface. In this tomb were found the remains of ten skeletons; a copper bracelet; two copper anklets; a copper pin; a copper nose-ring; a white limestone seal cylinder, badly defaced, only a seated figure faintly visible; ninety-three beads of various stones, metal, shell, and amber (?); shells and remnants of shells; a piece of a copper finger-ring; parts of gold ornaments on a clasp with bluish-black stone; a plain clay dish; an enamelled clay lamp; this vase and the one shown in Fig. 4. These contained apparently food for the dead, or an offering of the same. Although this tomb was of brick, yet from the depth at which it was found in hill VI., and from the Babylonian seal cylinder found there, I am inclined to suppose that it belonged to a good Babylonian period.

Fig. 2. Blue-glazed vase, amphora shape, bowl corrugated longitudinally; height, .18 m.; circumference, .3875 m. This was found on the first day of our excavations in the first year, on hill I., near a Parthian coffin, and belongs, presumably, to the Parthian period In shape it imitates Greek work, but the execution is clumsy, and the neck is quite awry. This is characteristic of the pottery of this period.

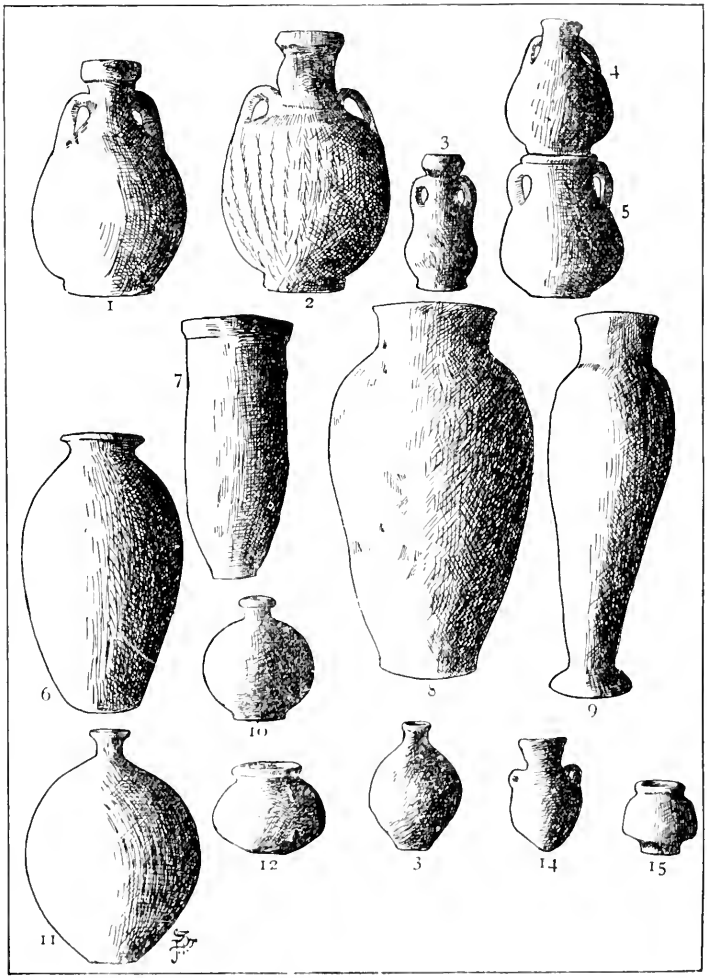


PLATE VII.

Fig. 3. Small, slender, blue-enamelled vase, two handles, opening very small. Height, .0913 m.; circumference, .164 m.; diameter of mouth, .026 m. It was found in hill I., some five metres below the surface, but in a stratum full of slipper-shaped coffins. It belongs, I believe, to the Seleucidan period. It had apparently been used in connection with a burial, and was full of small seeds of a black-brown color.

Fig. 4. A two-handled vase, blue-enamelled within and without. Height, .095 m.; circumference, .238 m.; diameter of mouth, .028 m. Place of finding and date were given under Fig. 1.

Fig. 5. Another type of large-bowled, blue-enamelled amphora, found in the upper strata of hill I., and belonging to the Parthian period or later.

Fig. 6. Plain clay jar, good work; height, .24 m.; circumference, .46 m.; diameter of mouth, .062 m. This was found in one of the trenches on the west side of hill V., in the Babylonian stratum. It is a good specimen of the better plain pottery of that period.

Fig. 7. Large clay goblet-shaped vase, with ribbon rim; height, .223 m.; diameter of mouth, .099 m. This was found in another trench in the same part of hill V. as Fig. 6, and belongs to the same period. It is, however, of much inferior workmanship. Jars of this same general shape, but more than twice this size, and with relatively much thicker walls, were used in the oldest burials found by me at Nippur, two such jars, one larger than the other, being joined together at the mouths (*cf.* Plate IV., Fig. 2). Similar burials I found at Juha, opposite Anbar.

Fig. 8. Plain clay jar of rough workmanship; height, .312 m.; circumference, .595 m.; diameter of mouth, .106 m. This was a common type from the early Babylonian period onward. It was in a jar of this sort that we found buried in hill V., about 8 to 10 metres below the surface, tablets of the Hammurabi dynasty.

Fig. 9. Large clay goblet-shaped jar of rude workmanship; height, .31 m.; diameter at mouth, .077 m. This is another early type which persisted also into later times.

Fig. 10. A white-enamelled vase, roundly egg-shaped, short neck, small opening, enamel partly chipped off. Height, .119 m.; circumference, .278 m.; diameter of mouth, .033 m. This vase was found, along with bowl and urn-shaped coffins, in hill V., and belongs, apparently, to the Cossæan period. The glaze is characteristic of that period.

Fig. 11. Blue-enamelled clay vase; bowl large, egg-shaped, neck short, mouth very small; height, .192 m.; circumference, .45 m.; diameter of mouth, .023 m. This vase was found with coffins of the two jar and tub types in hill V. The shape is characteristic of the best Babylonian period.

Figs. 12 and 15 are small clay jars of common types found both in the Babylonian period and later.

Figs. 13 and 14 are enamelled jars, one light-yellow, the other blue, both much encrusted, and with the enamel badly chipped off, of types common in the Babylonian strata, from 1500 B.C. onward, in hill V.

Plate VIII.

Figs. 1, 2, and 3 are three more types of plain clay jars from hill V. Fig. 2 is .195 m. in height; Fig. 3, .165 m., and Fig. 1 a trifle larger. All were found in connection with Babylonian graves, and contained date stones, burnt wood, small bones, etc.

Fig. 4 is a glass vial, almost white; height, .14 m.; diameter of mouth, .04 m. Several of these were found in late graves, especially on hill I. The form seems to show Greek influence. Another specimen is represented in Plate I.

Fig. 5. Alabaster bottle; height, .30 m.; circumference, .228 m.; diameter of mouth, .02 m. This was found in a Babylonian burial urn on hill VI. In the same urn was a fragment of a blue-enamelled clay bottle, .18 m. in height, with a circumference of .224 m., a peculiar shape for a pottery vessel. It was decorated with a pattern in stripes and cross stripes. Smaller alabaster bottles we found in connection with tombs of the Babylonian period in hill V.; and I also found several fragmentary bottles of the same material in the pre-Sargonic strata in the Temple Hill.

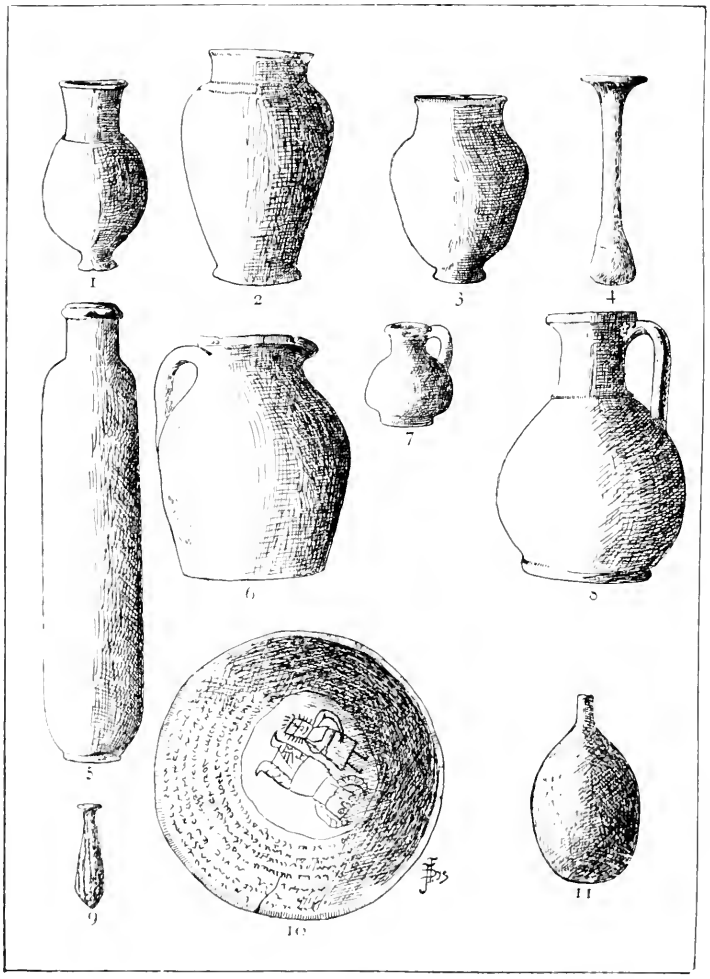


PLATE VIII.

Figs. 6, 7, and 8 are three blue-glazed pitchers. Figs. 6 and 8 are very large, the former .27 m., and the latter about .30 m. These two were found in the very latest strata on the Temple Hill, and Fig. 7 in the late strata on hill I. We purchased the exact counterpart of Fig. 6 in Hillah, full of oil or butter, and they are manufactured now in that region.

Figs. 9 and 11 are specimens of glass bottles. Fig. 9 was fluted, of dark, brownish-blue color, and originally enamelled. Height, .045 m. ; circumference, .075 m. ; diameter of mouth, .019 m. This was found near the surface, in the outer hill line to the southeast of the temple, and is presumably late. With it were found fragments of two large glass bowls, prominently fluted on the outside. The work on all these pieces was handsome. The other bottle, Fig. 11, which is much larger, is of a very fragile glass, of a smoky color. The mouth was broken off. This was found in connection with a late grave on the surface of the Temple Hill.

Fig. 10. A specimen of the Hebrew bowls found by us in such great numbers, the translation of one of which, by Professor Gottheil, is given in Chapter VI. A fair specimen of one of these was .08 m. in height, and .175 m. in diameter. One we found of more than twice this size, and a few were considerably smaller. The figures in the centre of this bowl represent, I suppose, demons. Generally there is but one figure, and some of these are very grotesque. In one case the figure was obscene ; sometimes mystic symbols take the place of figures. The writing is in ordinary black ink, not baked in, I think. Sometimes the bowls are inscribed without as well as within. A few were written in Arabic and Syriac, but the great majority in Hebrew, the script varying from fairly good square characters to a very degenerate cursive. Occasionally there was no real inscription, but mere unintelligent imitations of letters, such as are found on the similar bowls used by Jews in Egypt to-day, I am told.

It will be evident, from the above descriptions and representations of pottery, that the work was, on the whole, rude. The best period was the period of the Cossæan kings, or thereabouts. With the Seleucid conquest some good designs

come in, but the execution is inferior. With the Parthian period the decadence of the pottery manufacture is marked. The best specimens of Cossæan pottery I have been unable to exhibit here. I have no satisfactory photographs, and the drawings in my note-book are not good enough to reproduce. Some of the small ball- and egg-shaped vases found in tombs of that period were very graceful, and the patterns of white and yellow artistic and effective. The glaze, however, was never quite satisfactorily applied in Babylonian pottery. It was not burnt in, the clay beneath it was crumbly, and the enamel tends to chip. Some few fragments of black and red pottery I found from very early periods, but no complete specimens. The coloring in these would almost bear comparison with the Greek red and black pottery, but the designs were primitive, always in lines, circles, triangles, and the like, never in figures. All of my specimens of fragments of this pottery were lost with our collection of sherds at Baghdad.

APPENDIX B.

WEATHER RECORD AT NIPPUR, JANUARY 21—MAY 3, 1890.

Jan. 21. Barometer at 8 A.M., 77; thermometer, 3° Réaumur; 12 M., bar. 77.3, ther. 12°; 7 P.M., bar. 77.3, ther. 7°. Cloudy; still.

Jan. 22. 7 A.M., bar. 77.3, ther. 2°. Bright; cold wind from N.W., subsided after sundown.

Jan. 23. Froze during the night; 9 A.M., bar. 77.45, ther. 7°; 12 M., bar. 77.5, ther. 11°; 7 P.M., bar. 77.45, ther. 7°. High, cold wind from southwest, subsiding considerably at sundown.

Jan. 24. 7.30 A.M., bar. 77.45, ther. 7°; 3 P.M., bar. 77.30, ther. 12°; 7 P.M., bar. 77.25; ther. 9½°. Day clear and bright; wind from northwest, but not so fresh as on two preceding days, fell at sundown.

Jan. 25. 8 A.M., bar. 77.20, ther. 9°; 6.30 P.M., bar. 77, ther. 10°. Day bright and warm; wind northwest, fell at sundown.

Jan. 26. 8 A.M., bar. 77.35, ther. 9½°, wind S. 30 E.; 12 M., bar. 77.30, ther. 17°, high wind S. 30 E.; 6 P.M., bar. 76.45, ther. 12°, wind S. 30 E., almost a gale; air misty or rather hazy.

Jan. 27. 7.30 A.M., bar. 76.25, ther. 8°, cold, high wind S. 30 E., sky cloudy; 12 M., bar. 76.40, ther. 12½°, wind almost a gale from west; 12.30 P.M., slight shower, and wind fell suddenly; 6 P.M., bar. 76.50, ther. 11½°, calm.

Jan. 28. 8 A.M., bar. 76.80, ther. 10°, wind fresh N. 70 W.; 1 P.M., bar. 77, ther. 12°, wind much subsided; 5.30 P.M., bar. 77, ther. 12°., cloudy, calm.

Jan. 29. 7.30 A.M., bar. 77, ther. 8°, cloudy, calm; 12 M., bar. 77.10, ther. 18°, light wind S. 10 E., cloudy-bright; 6 P.M., bar. 77.20, ther. 12°, calm, clear.

Jan. 30. 7.30 A.M., bar. 77.40, ther. 9°, bright, wind fresh N. 20 W.; 2 P.M., bar. 77.50, ther. 17°, wind fresher N. 40 W.; 8 P.M., bar. 77.40, ther. 11°, wind fresh N. 40 W.

Jan. 31. 7.30 A.M., bar. 77.40, ther. 5°, strong wind N. 70 W., cold, bright; 12 M., bar. 77.50, ther. 16°, high wind, sandstorm; 6 P.M., bar. 77.50, ther. 12½°, clear, wind light.

Feb. 1. 7.30 A.M., bar. 77.50, ther. 7°, wind light northwest, bright;

12 M., bar. 77.50, ther. 17°, wind fresh N.W., bright; 6 P.M., bar. 77.50, ther. 14°, wind light.

Feb. 2. 7.30 A.M., bar. 77.25, ther. 8°, bright, no wind; 12 M., bar. 77.20, ther. 20°, very light south wind; 6 P.M., bar. 77, ther. 14°, slightly cloudy, wind light from south.

Feb. 3. 7.30 A.M., bar. 76.80, ther. 11°, bright, wind light from S.E.; 12 M., bar 76.85, ther. 21½°, bright, wind fresh from N.W.; 6 P.M., bar. 76.85, ther. 16°, wind light, bright.

Feb. 4. 7.30 A.M., bar. 76.85, ther. 8°, wind strong N. 70 W., bright; 12 M., bar. 76.85, ther. 16°, wind almost a gale, and air full of sand and dust like a cloud; 6 P.M., bar. 76.90, ther. 11½°, wind strong but subsided, clear.

Feb. 5. 7.30 A.M., bar. 76.90, ther. 3°,, bright, wind light northwest (froze in night); 12 M., bar. 77, ther. 16°, wind fresh N. 40 W., somewhat cloudy; 6 P.M., bar. 77.10, ther. 10°, no wind, hazy.

Feb. 6. 7.30 A.M., bar. 76.95, ther. 2°, hazy, no wind; 12 M., bar. 77.05, ther. 15½°, cloudy-bright, no wind; 6 P.M., bar. 77, ther. 12°, cloudy-bright, no wind.

Feb. 7. A few drops of rain during the night, not enough to lay dust. 7 A.M., bar. 77.10, ther. 8½°, cloudy, no wind; 12 M., bar. 77, ther. 17°, a high wind from southeast, cloudy-bright; 6 P.M., bar. 66.95, ther. 12°, wind light from east, somewhat cloudy.

Feb. 8. During the night about as much rain as on the night before. 7 A.M., bar. 76.80, ther. 9°, cloudy, no wind; 12 M., bar. 76.60, ther. 13°. A very little rain in the morning, no wind. 10 P.M., bar. 76.80, ther. 10°, showers through the afternoon, no wind.

Feb. 9. 7.30 A.M., bar. 76.60, ther. 8°, wind light from northwest, day warm and bright; 6 P.M., bar. 76.70, ther. 12°, clear, no wind.

Feb. 10. 7.30 A.M., bar. 76.80, ther. 11°, light wind S.S.E., half-cloudy; 12 M., bar. 76.80, ther. 18°, wind, S.E., half-cloudy; 6 P.M., bar. 76.80, ther. 19°, wind E.S.E., light, half cloudy.

Feb. 11. Rained hard in the night, with thunder, and a high wind from E. to S.E.; 7.30 A.M., bar. 76.60, ther. 13°, light rain, light wind from S.S.E.; 12 M., bar. 76.75, ther. 18½°, wind light from south, cloudy, oppressive; 6 P.M., bar. 76.75, ther. 16½°, wind light from east, cloudy.

Feb. 12. 7.30 A.M., bar. 76.40, ther. 13°, high wind from east, cloudy, and almost rainy. During night much rain, with high wind from east. 12 M., ther. 17°. At 2.30 P.M. a gale from S.E., thunder and lightning, a violent downpour of rain. At 4 P.M., bar. 75.90, ther. 16°, calm, sultry and heavy, rain ceased; 8.30 P.M., bar. 76, hard rain, high wind from southeast.

Feb. 13. 7.30 A.M., bar. 76.40, ther. 9°, bright, wind fresh from northwest; 12 M., bar. 76.70, ther. 15°, wind strong from northwest; 6 P.M., bar. 76.70, ther. 12°, calm, cloudy. Rained hard during forepart of night, with high wind from southeast.

Feb. 14. 7.30 A.M., bar. 76.90. ther. 10°, cloudy, wind fresh from west; 12 M., bar. 77, ther. 15°, cloudy, no wind; 6 P.M., bar. 77, ther. 13°, cloudy, no wind.

Feb. 15. 7.30 A.M., bar. 76.90, ther. 8°, cloudy, calm; 12 M., ther. 13°, cloudy, calm; 6 P.M., bar. 77, ther. 13°, cloudy, very light wind from northwest.

Feb. 16. 7.30 A.M., bar. 76.80, ther. 10°, wind very light from north; 6 P.M., bar. 76.70, ther. 13°, cloudy, calm.

Feb. 17. 7.30 A.M., bar. 76.70, ther. 10°, raining. Rained also at intervals during the night. Wind very light N.E. by N.; 12 M., bar. 76.60, ther. 14°, cloudy, wind N.E. Showers during the morning. 6 P.M., bar. 76.60, ther. 10°. Cloudy, rained during afternoon.

Feb. 18. 7.30 A.M., bar. 76.90, ther. 8°, wind light west of north, bright sun but light mist rising from wet earth; 12 M., bar. 77.20, ther. 15°; wind light N. by W., cloudy-bright; 6 P.M., bar. 77, ther. 12½° wind light, almost calm, half-clear.

Feb. 19. 7 A.M., bar. 77.10, ther. 6°, wind light west of north, clear; 1 P.M., bar. 77, ther. 15°, wind strong west of north, clear; 8 P.M., bar. 77, ther. 10½°, wind light west of north, clear.

Feb. 20. 7 A.M., bar. 76.80, ther. 6½°, clear, wind fresh from N.W.; 12 M., bar. 76.80, ther. 16°, clear, wind N.W., fresh; 6 P.M., bar. 76.85, ther. 11½°, half-cloudy, showers to the southwest of us, calm.

Feb. 21. Showers during the night. 7 A.M., bar. 77.10, ther. 8½°, clear, wind light from N.E.; 12 M., bar. 76.90, ther. 14°, showery, wind light from N.E.; 6 P.M., bar. 77, ther. 10°, wind light from east, almost clear.

Feb. 22. 7 A.M., bar. 76.95, ther. 9½°, clear, wind strong S. 30 E.; 12 M., bar. 76.90, ther. 17°, high wind from S., haze in atmosphere caused by dust and sand; 2 P.M., wind S. 30 W. falling rapidly; 6 P.M., bar. 76.90, ther. 14°, wind light from north, slightly hazy.

Feb. 23. 7.30 A.M., bar. 77, ther. 7°, cloudy, fresh gusty wind from N. W.; 12.30 P.M., bar. 77.15, ther. 14°. hazy, wind fresh N.W.; 6 P.M., bar. 77, ther. 11°, hazy, calm; 8.30 P.M., slight aurora borealis, apparent point of radiation horizon south of west.

Feb. 24. 7.30 A.M., bar. 77, ther. 11°, wind light N.E., bright; 12 M., bar. 77, ther. 16°, wind N.E., light, clear; 6 P.M., bar. 76.90, ther. 16°, almost calm, what wind there was from east, cloudy and rain beginning.

Feb. 25. 7 A.M., bar. 76.70, ther. 11°, wind light from east, raining; 12 M. bar. 76.60, ther. 18°, wind strong from S.E., bright. During afternoon very high wind from S.E.; 6 P.M., bar. 76.50, ther. 16½°, calm, rain; 8 P.M., violent rain with high wind; 11 P.M., bright and calm.

Feb. 26. 7 A.M., bar. 76.50, ther. 11°, cloudy, wind light from S.S.E.; 12 M., bar. 76.50, ther. 16°, cloudy, calm; 3 P.M., fresh wind from north; 6 P.M., bar. 76.50, ther. 12°, clear, calm.

Feb. 27. 7 A.M., bar. 76.70, ther. 5½°, clear, wind very light from southwest; 12 M., bar. 77, ther. 17°, cloudy-bright, wind light from southwest; 6 P.M., bar. 77, ther. 19°, hazy, wind very light north of west.

Feb. 28. 7 A.M., bar. 77.30, ther. 10°, wind light from S.E., clear; 12 M., bar. 77.30, ther. 19°, clear, wind light from S.E.

March 1. 7 A.M., bar. 77.10, ther. 10°, wind fresh from northwest, clear; 12 M., bar. 77.20, ther. 22°, high wind from northwest, air full of dust; 6 P. M., bar. 77.10, ther. 16°, high wind from northwest, dust haze.

March 2. 7 A.M., bar. 77, ther. 15°, high oppressive wind from north northwest, a dust haze; 12 M., bar. 77.10, ther. 22°, very high wind northwest by west, haze of dust; 6.30 P.M., bar. 77, ther. 13°, wind light N.W., cloudy, oppressive.

March 3. 7 A.M., bar. 77, ther. 15°, clear, wind strong N.N.W.; 12 M., bar. 77, ther. 22½°, wind very high N.N.W., dust haze. Wind dropped at sunset. 10 P.M., bar. 76.90, ther. 15°, clear, almost calm.

March 4. 7 A.M., bar. 76,70, ther. 13°, wind fresh N.W., clear; 12 M., bar. 76.70, ther. 29°, wind strong N.W., hazy; 8 P.M., bar. 76.90, ther. 18°, calm.

March 5. 7 A.M., bar. 76.90, ther. 15°, clear, wind light N.N.W.; 12 M., hazy, bar. 77, ther. 25°, wind light, N.N.W.; 6 P.M., bar. 77, ther. 25°, clear, calm.

March 6. 6.30 A.M., bar. 76.80, ther. 12°, clear, calm; 12 M., bar. 76-.80, ther. 20°, hazy, strong wind from south; 6 P.M., bar. 76.50, ther. 20°, clear, calm.

March 7. 6.30 A.M., bar. 76.50, ther. 15°, cloudy, wind very light S.S. E.; 12 M., bar. 76.50, ther. 25°, cloudy, wind very high; 6 P.M., bar. 76-.40, ther. 21°, cloudy, very high wind S.S.E.

March 8. 6.15 A.M., bar. 76.35, ther. 14°, cloudy, wind fresh S.S.E. High wind and a very little rain during the night, not enough to lay the dust. 12 M., cloudy, dust-storm, bar. 76.20, ther. 22°, wind very high from S.S.E.; 4 to 7 P.M., showers with thunder and lightning; 9 P.M., bar. 76.15, ther. 15°, cloudy, wind light N.N.W.

March 9. 7 A.M., bar. 76.10, ther. 16°, cloudy, wind S. of E.; 12 M., bar. 76.10, ther. 22°, cloudy, showers; 6 P.M., bar. 76.10, ther. 15°, hard rain.

March 10. Rained very hard, with high wind all night. 7 A.M., bar. 76, ther. 14°, raining hard, strong wind from S.E.; 12 M., bar. 76, ther. 12°, raining hard, wind fresh N.N.W. Rained all the afternoon, began to clear about sunset with high wind from northwest. Rainbow at sunset. Afterwards another sharp shower. 8 P.M., bar. 76.40, ther. 16°, cloudy, no wind.

March 11. Showers during the night. 7 A.M., bar. 76.50, ther. 9°, cloudy, calm. A few drops of rain, and a few gleams of sunshine during the morning. 12 M., bar. 76.40, ther. 16°, cloudy, wind fresh S.S.E. In the afternoon a high wind from S.S.E.; 6 P.M., bar. 76.40, ther. 11°, cloudy, wind light S.S.E.

March 12. 7 A.M., bar. 76.40, ther. 7°, clear, wind light E. by S.; 12 M., bar. 76.50, ther. 18°, clear, wind fresh S.E.; 6 P.M., bar. 76.50, ther. 13°, cloudy, wind light S. by E.

March 13. 6.30 A.M., bar. 76.35, ther. 9°, clear, wind light from E. by S. ; 12 M., bar. 76.40, ther. 19°, clear, wind fresh from E. ; 6 P.M., bar. 76.20, ther. 16°, cloudy, almost calm.

March 14. 6.30 A.M., bar. 76, ther. 12°, raining hard, wind light from an easterly direction ; 12 M., bar. 76, ther. 16°, rainy, wind light from easterly direction. Occasional growling of thunder. During the afternoon there was a gale from the east with a tremendous downpour of rain, flooding everything and beating right through the reed huts. 6 P.M., bar. 75.90, ther. 16°, hard rain, little wind.

March 15. 6.30 A.M., bar. 76, ther. 12°, cloudy, wind fresh S.S.E. Rained hard all night, level ground almost a lake, buildings half-flooded. 12 M., bar. 76.15, ther. 17°, cloudy, wind light from east. During the morning bar. reached 76.35. At 4 P.M., gale from east and short sharp rain with thunder and lightning. 6 P.M., bar. 76.10, ther. 12°, cloudy, wind light from east.

March 16. 6.30 A.M., bar. 76.20, ther. 12°, cloudy, wind light E. by S.; 12 M., bar. 76.20, ther. 14°, raining, calm ; 6 P.M., bar. 76.10, ther. 14°, calm, cloudy, thunder-storm passing us on the east going from south to north.

March 17. Occasional showers during the night. 6.30 A.M., bar. 76.40, ther. 11°, cloudy, calm. 12 M.. bar. 76.50, ther. 17°, cloudy-bright, what wind there is N.W. by W. ; 6 P.M., bar. 76.50, ther. 14°, clear, almost calm.

March 18. 6.30 A.M., bar. 76.50, ther. 11°, cloudy, calm ; 12 M., bar. 76.50, ther. 21°, cloudy-bright, wind light from south ; 6 P.M., bar. 76.40, ther. 14°, raining, a light shower of brief duration, preceded by a little wind, very light N.W.

March 19. 6.30 A.M., bar. 76.40, ther. 12°, clear, light wind from S.W.; 12 M., bar. 76.60, ther. 20°, cloudy-bright, wind light S.E. ; 6 P.M., bar. 76.50, ther. 14°, cloudy, calm. During afternoon two light showers, a little thunder and lightning, and a brief wind storm from N.E.

March 20. 6.30 A.M., bar. 76.60, ther. 13°, cloudy, wind light S. of W. At 7.30 fresh breeze, at 8 A.M. breeze died, rain-storm began. 12 M. bar. 76.80, ther. 16°, raining, calm. Rain stopped about 1 P.M. 6 P.M., bar. 76.60, ther. 15°, cloudy, calm.

March 21. 6.30 A.M., bar. 76.60, ther. 12°, clear, wind light N. by W. ; 12 M., bar. 76.70, ther. 21°, cloudy-bright, wind light N. by W. ; 4 P.M., short sharp rain-storm, little lightning ; 6 P.M., bar. 76.60, ther. 15°, cloudy, calm.

March 22. 6.30 A.M., bar. 76.60, ther. 13°, clear, wind fresh from W. ; 1 P.M., bar. 76.50, ther. 20°, wind more fresh, clear ; 7 P.M., bar. 76.80, ther. 15°, clear, calm.

March 23. 6.30 A.M., bar. 76.90, ther. 13°, clear, wind light from west ; 1 P.M., ther. 20°, clear.

March 24. 6.30 A.M., bar. 76.80, ther. 13°, clear, wind light from N.W.; 1 P.M., bar. 76.80, ther. 21°, clear, wind fresh N.W. by W. ; 8 P.M., bar. 76.70. ther. 13°, clear, calm.

March 25. 6.30 A.M., bar. 76.70, ther. 12°, wind fresh from N.W., clear; 1 P.M., bar. 76.80, ther. 22°, clear, wind fresh N.W.; 7 P.M., bar. 76.60, ther. 15°, clear, calm.

March 26. 6.30 A.M., bar. 76.60, ther. 15°, clear, wind light from S.E.; 1 P.M., bar. 76.50, ther. 22°, clear, wind strong from S.E. At 6.30 P.M. a sudden wind-storm descended from N. of W. after a dull and lowering afternoon. The wind, which was accompanied by clouds of dust, was strong enough to carry away mats and a palm-log from the roof of one of the verandas. 10 P.M., bar. 76.50, ther. 14°, wind strong N. by W., half-cloudy.

March 28. 6 A.M., bar. 76.65, ther. 12½°, half-cloudy, calm; 3 P.M., bar. 76.70, ther. 18°, half-cloudy, wind light N. by W.; 11 P.M., bar. 76.85, ther. 12°, clear, calm.

March 29. 6 A.M., bar. 76.80, ther. 12°, clear, wind light S.S.E.; 2 P.M., bar. 76.60, ther. 21°, clear, wind fresh S.S.E.

March 30. 6 A.M., bar. 76.50, hazy, wind east and fresh. Wind fell, morning sultry, latter part strong wind from W.N.W. Later, threatenings of a storm.

March 31. 5 A.M., bar. 76.70, ther. 11½°, hazy, wind fresh from N. by W.; 1.30 P.M., bar. 76.70, ther. 20°, cloudy, calm; 6 P.M., bar. 76.65, ther. 16°, calm, a few drops of rain.

April 1. Rained almost all night. 5 A.M., bar. 76.50, ther. 16°, raining, very slight movement of air from S. by E.; 8.30 A.M., raining violently, fresh breeze from N. of E.; 9.30 A.M., rain stopped, wind rising. About 10 A.M. violent rain with high wind from easterly quarters. 1 P.M., bar. 76.40, ther. 15°, hard rain, high wind from S.E. About 2.30 P.M. rain stopped, wind increasing. 6 P.M., bar. 76.10, ther. 15½°, cloudy, strong wind from S.E.

April 2. 5 A.M., bar. 76, ther. 14⅔°, cloudy, threatening, wind strong south a little east. During the morning high wind, and several showers. 12.30 P.M., bar. 75.90, ther. 19°, cloudy, threatening, wind light; 3.30 P.M., wind high from north a little west, a thunder-storm passing to east and a few drops of rain fell; 6 P.M., bar. 75.90, ther. 15°, cloudy, calm.

April 3. Showers during the night. 5 A.M., bar. 76.20, ther. 11½°, clear, wind light S. of W.; 12.30 P.M., bar. 76.40, ther. 19°, clear, wind fresh S. of W.; 6 P.M., bar. 76.40, ther. 18°, half-clear, lightning in distance, calm.

April 4. 5 A.M., bar. 76.50, ther. 11½°, clear, almost no wind, what little there is from W.; 12.30 P.M., bar. 76.85, ther. 23°, clear, wind very light from W.; 6 P.M., bar. 76.80, ther. 18°, clear, calm.

April 5. 5 A.M., bar. 76.70, ther. 13°, cloudy, wind very light south a little east; 12.30 P.M., bar. 76.80, ther. 23½°, hazy, wind light; 6 P.M., bar. 76.80, ther. 18°, clear, wind fresh.

April 6. Rained a little during the night. 6 A.M., bar. 76.50, ther. 15½°, cloudy, wind strong from N.W. 12.30 P.M., bar. 76.35, ther. 25°, high wind from S.E. with much dust, hazy. In afternoon wind from N.W. Very

sultry and sickish atmosphere, dust haze. 6 P.M., half-cloudy, almost calm, bar. 76.30, ther. 19°.

April 7. 5 A.M., bar. 76.50, ther. 13°, clear, wind N.W. fresh. At noon strong wind. 6 P.M., calm, bar. 76.80, ther. 17½°.

April 8. 5 A.M., bar. 76.70, ther. 13°, wind very light N.W. by W., clear; 12.30 P.M., bar. 76.95, ther. 24°, wind light N.W. by W., clear; 6 P.M., bar. 76.75, ther. 18°, cloudy, almost calm.

April 9. 5 A.M., bar. 76.80, ther. 14°; 12.30 P.M., bar. 76.80, ther. 23½°; 6 P.M., bar. 76.60, ther. 18½°. Little or no wind, a few faint puffs only from different directions. Slightly cloudy.

April 10. 5 A.M., bar. 76.55, ther. 14°, cloudy, wind fresh from S.E.; 12.30 P.M., bar. 76.65, ther. 21½°, a few drops of rain, wind light from S.E. Hard showers through the afternoon with gusts of wind from S.E. 6 P.M., bar. 76.50, ther. 17°, cloudy, wind light from S.E.

April 11. Rained during night. 5 A.M., bar. 76.50, ther. 16°, cloudy, wind fresh from S.E. 12.30 P.M., bar. 76.50, ther. 22½°, cloudy, calm, thunder; 1 P.M., violent rain with high wind from N.W., a deluge less than half an hour; 6 P.M., bar. 76.50, ther. 16°, cloudy, wind very light from N.W.

April 12. 5 A.M., bar. 76.50, ther. 15°, cloudy, wind half-fresh from northwest. 12.30 P.M., bar. 76.50, ther. 23°, hazy, wind light from N.W.; 6 P.M., bar. 76.50, ther. 19°, clear, wind very light from north.

April 13. 6 A.M., bar. 76.50, ther. 16°, clear, wind fresh from N.W.; 12 M., ther. 24°; 6 P.M., bar. 76.60, ther. 19°, calm, hazy.

April 14. 5 A.M., bar. 76.50, ther. 16°, hazy, wind very light from S.; 3 P.M., bar. 76.50, ther. 25°, hazy; 6 P.M., bar. 76.45, ther. 21°, cloudy, calm.

April 15. 5 A.M., bar. 76.20, ther. 14°, clear, calm; 11 A.M., ther. 27°. Wind, when it blew during the day, from S.E. Not clear, half-cloudy, hazy, and very sultry.

April 16. Rained a very little during the night. 5 A.M., bar. 75.75, ther. 17°, cloudy, threatening, wind fresh from S.E.; 12 M., bar. 75.90, ther. 24½°, hazy, wind very light from S.E. During earlier part of morning several showers. 6 P.M., bar. 76, ther. 19°, violent rain-storm with thunder and lightning, and high wind from S.E.

April 17. 5 A.M., bar. 76, ther. 14°, half-cloudy, wind fresh from N.W. Wind died in morning. 12 M., bar. 76.50, ther. 21°, violent rain, thunder and lightning, wind N.E. Violent storms through afternoon. 6 P.M., bar. 76, ther. 16°, clearing, wind fresh from N.E.

April 18. 5 A.M., bar. 75.80, ther. 13°, wind fresh and cool from north; 12.30 P.M., bar. 75.90, ther. 22½°, wind light from north; 6 P.M., bar. 75.90, ther. 17½°, wind light from north.

April 19. 5 A.M., bar. 76, ther. 13°, clear, calm; 1 P.M., bar. 76.10, ther. 25°, wind fresh from S. by E.; 3 P.M., short dust-storm from north; 6 P.M., bar. 76, ther. 18°, clear, calm; 8 P.M., rain with high wind from S. by E. Showers and much wind during night.

April 20. 5.30 A.M., bar. 76.30, ther. 15°, showery, high wind S. by E.; 1 P.M., bar. 76.15, ther. 21°, hazy, almost a gale from E. by S.; 5.30 P.M., storm with thunder and lightning; 6 P.M., raining, bar. 76, ther. 19°, gale continues.

April 21. 5 A.M., bar. 76.30, ther. 13°, clear, fresh wind from W. of N.; 12 M., bar. 76.40, ther. 26°, clear, fresh wind from W. of N.

April 22. 5 A.M., bar. 76.35, ther. 14°, wind light northwest, clear; 12 M., bar. 76.35, ther. 26°, clear, light wind from N.W.; 6 P.M., bar. 76.40, ther. 14°, clear, almost calm.

April 23. 5.30 A.M., bar. 76.40, ther. 16°, clear, calm; 12 M., bar. 76.50, ther. 27°, clear, wind light from S.E.; 6 P.M., bar. 76.50, ther. 19°, clear, wind light from S.E.

April 24. 5 A.M., bar. 76.40, ther. 17°, half-cloudy, calm; 12 M., bar. 76.40, ther. 25°, hazy, high wind from S.E. Dust and flies overwhelming. 6 P.M., bar. 76.45, ther. 22°, cloudy, wind light from N.W. A very few drops of rain in the afternoon.

April 25. 5 A.M., bar. 76.50, ther. 18°, half-cloudy, wind strong from N.W. A few drops of rain in the night. 6 P.M., bar. 76.30, ther. 20°, high wind from N.W., cloudy, a few drops of rain.

April 26. 4.30 A.M., bar. 76.50, ther. 15°, cloudy, calm; 12 M., bar. 76.45, ther. 26°, hazy, wind light from E.S.E.

April 27. In evening of 26th, thunder-storm; hard showers all night; at daylight very high wind from N.E.; 8 A.M., bar. 76.40, ther. 15°, raining, little wind; 1 P.M., bar. 76.40, ther. 16°, cloudy, threatening, wind fresh from N.W. Showers through the morning.

April 28. 5 A.M., bar. 76.50, ther. 15°, clear, calm; 12 M., bar. 76.60, ther. 22°, a few light clouds, wind fresh from N.W. by N.; 6 P.M., bar. 76.50, ther. 18°, hazy, calm.

April 29. 4.30 A.M., bar. 76.50, ther. 14°, clear, calm; 12 M., bar. 76.55, ther. 24°, clear, wind fresh from E. by N.; 6 P.M., bar. 76.55, ther. 15°, violent thunder- and lightning-storm from N.W.

April 30. 4.30 A.M., bar. 76.50, ther. 12°, clear, wind fresh from N.W.; 12 M., bar. 76.70, ther. 18°, clear, high wind from N.W.; 8.30 P.M., bar. 76.70, ther. 16½°, clear, light wind from N.W.

May 1. 4.30 A.M., bar. 76.75, ther. 13°, clear, light wind from N.W.; 12 M., bar. 77, ther. 25°, high wind from N. W., clear; 6 P.M., bar. 76.80, ther. 20°, clear, almost calm.

May 2. 4.30 A.M., bar. 76.90, ther. 15½°, clear, calm; 12 M., bar. 77, ther. 26½°, clear, wind very light N.W.; 6 P.M., bar. 76.50, ther. 21°, clear, calm or almost so.

May 3. 4.30 A.M., bar. 76.50, ther. 17°, clear, calm; 12 M., bar. 76.50, ther. 30°, clear, wind light from S. Half an hour later wind shifted to N.W. 6 P.M., bar. 76.50, ther. 22°, clear, wind very light from N.W.

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